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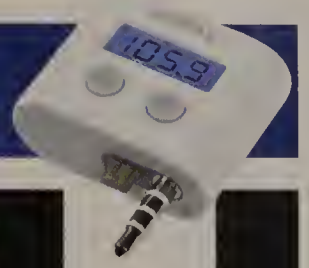

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The Mac Product Experts

MAC MINI
The Complete Guide
All You Need to Know about Apple's $499 Mac

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and Review

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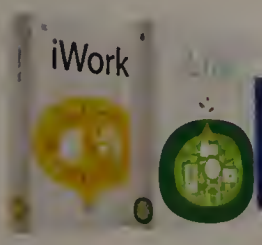
Inside the Box

PC Smackdown!
Mac vs. Dell

Mac Mini FAQs
Your Questions Answered



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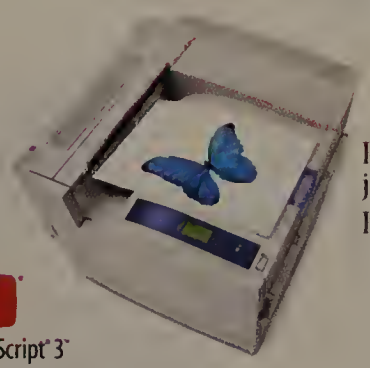

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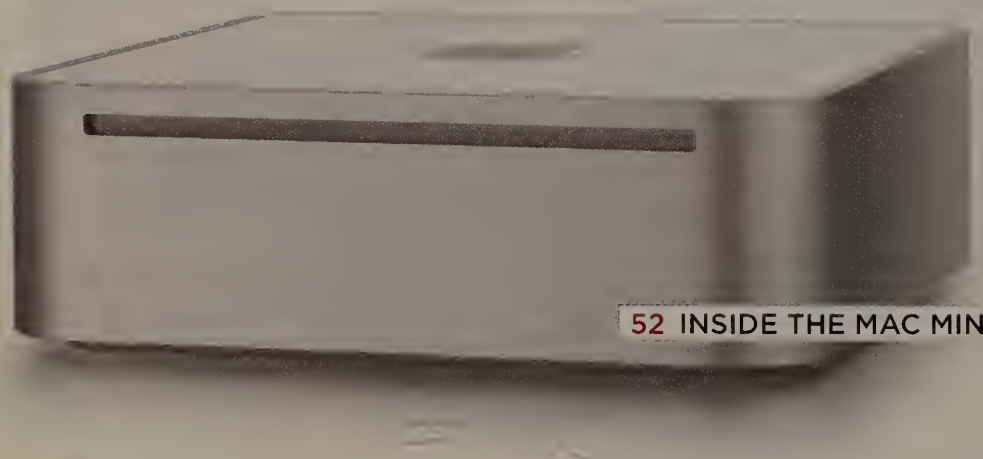

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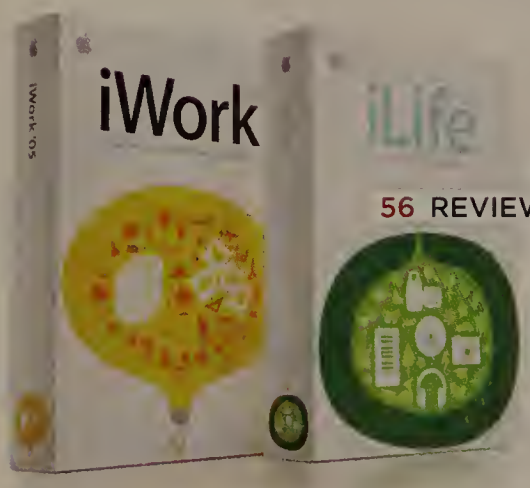

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The Virtual CD

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Apple's Advantage

For years, Apple's percentage of the worldwide computer market remained mired in the single digits. Conventional wisdom held that the high price of Macs was responsible for the small market share. But that argument has always been debatable, and with the introduction of the Mac mini, it has lost much of its remaining oomph.

However, the Mac mini's success won't depend on its low price alone. While the $499 price tag is a great way to draw the attention of potential Mac buyers, converting those people into actual Mac users would be pretty hard if it weren't for a major change in the way we use our computers today.

Media Machines

Apple started using the phrase *digital hub* a few years ago, because Steve Jobs and company realized that digital media were going to be at the heart of why people used their computers, especially in the home.

Apple's incredible success with the iPod and the iTunes Music Store has borne out the wisdom of that strategy. But while digital music is a major part of Apple's future, it isn't the only big trend out there that's breaking in the Mac mini's favor.

Over the past few years, digital photography has gone from oddball to mainstream. Most computer fans have bought digital cameras, and now even the computer-shy are buying them in record numbers.

Throughout this transition, Apple has been right there, ready to help. iLife comes free with every new Mac, so even the $499 Mac mini comes with a full suite of top-notch digital media software. iLife's apps are all easier to use than anything available for Windows, so when it comes to the digital stuff people really care about, Apple isn't playing catch-up with Windows. It's years ahead.

Priority Formats

As you may have guessed by our two successive cover stories on the subject, everyone here at *Macworld* thinks that the Mac mini could be huge for Apple (see "Inside the Mac Mini," page 52, to find out what makes it tick, and don't miss our review of the mini, page 24). It's not just the most important Apple product to be introduced since the iPod; it's the most important Mac to be introduced since the original iMac.

In the past, many people scorned the Mac because they thought that their home computer had to replicate the machine they had at work. If a Mac couldn't run the database they used at the office, connect to their company's Exchange mail system, or surmount any of a zillion other compatibility hurdles, buying one for their homes didn't make sense.

But consider what people use their home computers for these days: Safari's got Web browsing covered, and if that doesn't suit your tastes, there's always Firefox or OmniWeb. Mail is a simple, fully functional mail program. And Microsoft Office for the Mac lets you work with any Word, Excel, or PowerPoint files.

But the most important file formats for today's home computer users aren't .doc or .xls: They're MP3 and JPEG. And which company is the leader when it comes to giving people easy access to and control over their music and pictures? The same company that'll now sell you a $499 computer—or, rather, a $499 digital media appliance. (For more on how the Mac mini compares to a similarly priced PC, see Dan Frakes's story on the Mac mini–Dell PC price war [*Mac Beat*, page 14].)

A Computerized Appliance

The Mac's special chance for success really hit me a few weeks ago, while I was visiting some friends—PC users at home and at work.

Soon after my arrival, they began asking me about the Mac mini. One of them had used a friend's Mac to build a book in iPhoto and had been very impressed. So they'd thought about the number of digital photos they'd taken since their young daughter's birth, and about how easy it had been to use the friend's Mac to manipulate and organize those photos, and to create books, slide shows, and more.

The Mac mini's price may have spurred their interest in a Mac, but what really made the Mac a contender for them was a change in how they viewed it: not as a PC, for working with word processors and databases, but as an *appliance* for managing all their digital photos and music.

I think this shift, more than anything else, will give Apple an advantage over its PC competition. Because while Microsoft is the big name in PCs, what company has the hottest product in the consumer electronics world? Thanks to the iPod, it's Apple.

What do you think about the mini's chances for improving Apple's market share? Let me know at jason_snell@macworld.com, or share your thoughts at www.macworld.com/forums.

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April 2005, Volume 22, Issue 4
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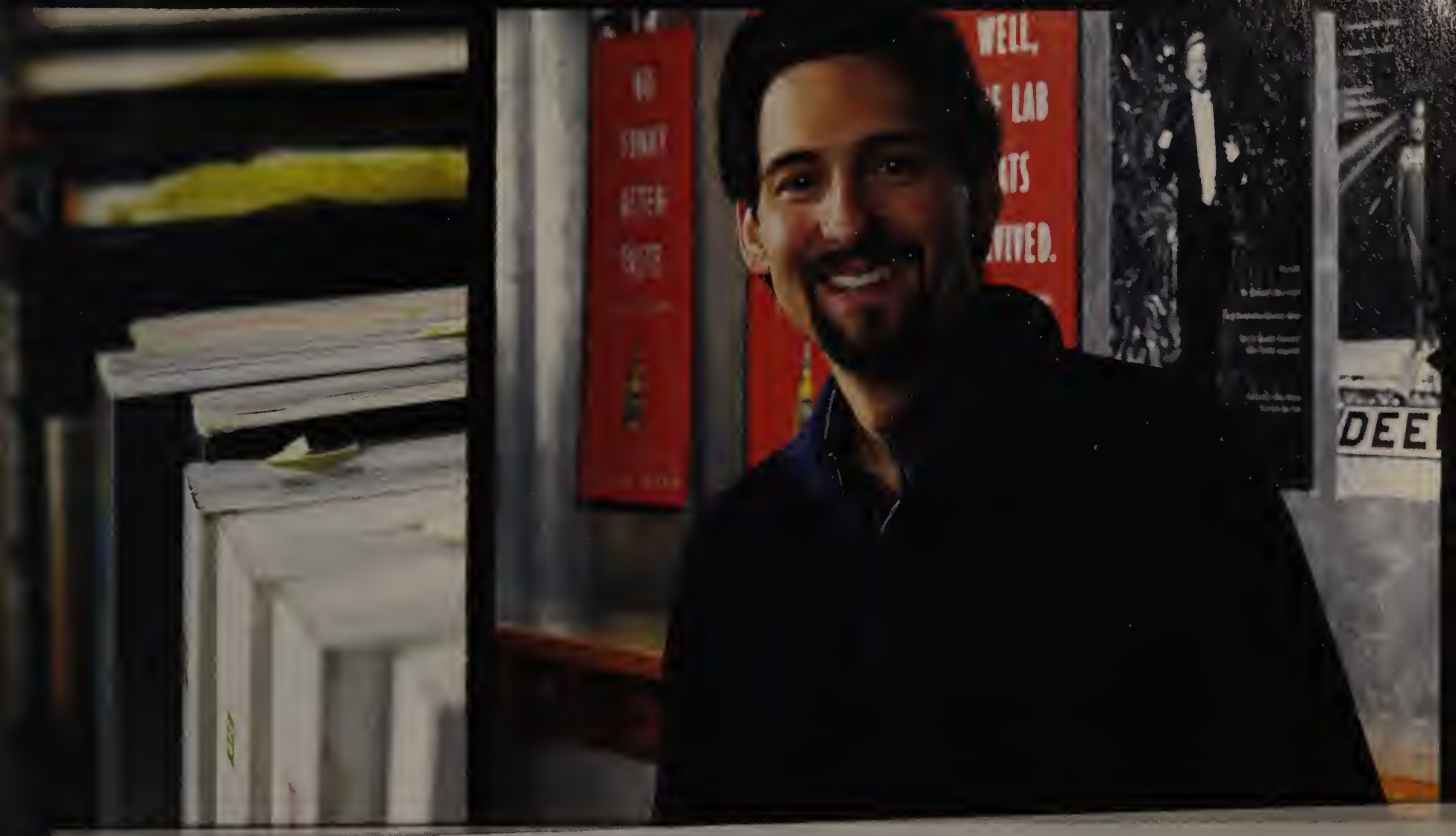

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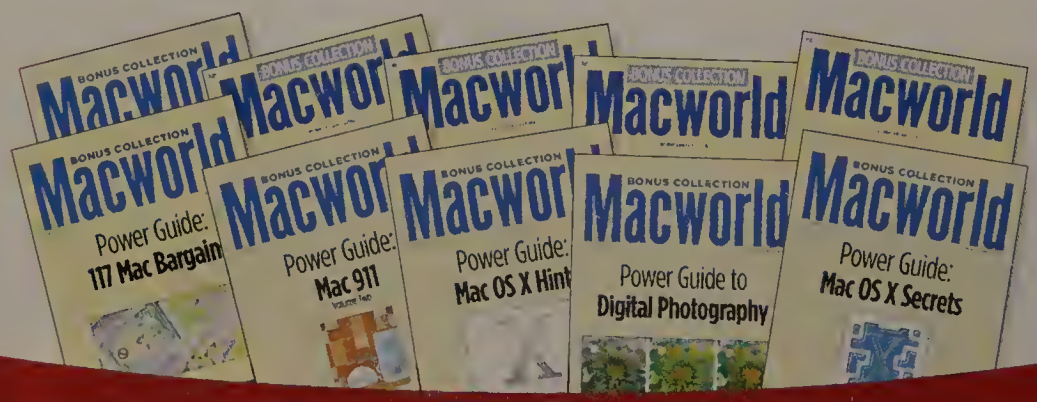

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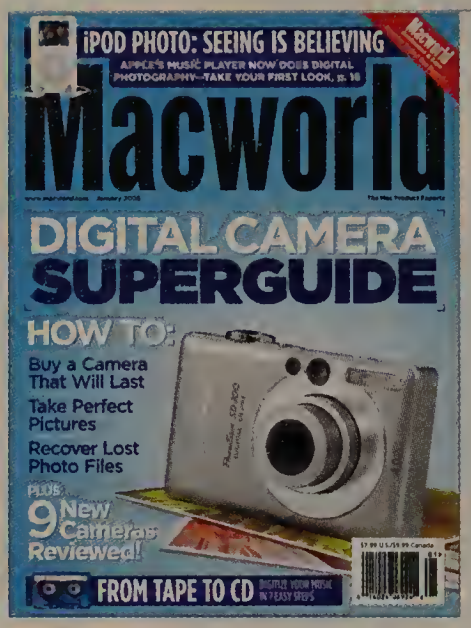


FEEDBACK

Who Needs a Video iPod?

Last fall, rumors flew fast and furious that Steve Jobs had a big iPod announcement in the works. Lead runner in the rumor race was an iPod that would store and play videos. As it turned out, TV fans were disappointed when all Steve had to offer was the iPod photo and (oh, yeah) the biggest rock band in the universe. In his January editor's note, Jason Snell asked you what you thought: Should Apple do a video iPod? Is the photo version good enough? And you said:

iPod Photo: Your Turn

PHIL BROWN

Maybe it's anti-Apple to even think it, but I think the iPod photo is way overpriced for what it does. Maybe some folks can use all that storage. But for me, my year-old PalmOne Zire 71 does fine, and it was half the price of an iPod. It plays MP3s; has a nice, high-resolution screen for sharing photos; plays videos; and holds my calendar, contacts, Web pages, and games. Sure, the SD flash card can't hold as much as a 20GB (or bigger) drive—but how much do most of us really want to carry around? I work with professional photographers who store photos on regular iPods while on long shoots, so the photo version's screen might be helpful for them. But they carry PowerBooks for editing, anyway. For my money, a good PDA will give more bang for the buck than an iPod of any flavor.

GEORGE PETRELLA

When the first iPods came out, I was one of those people who thought, "All this hoopla for an MP3 player?" As we've since learned, the iPod was a stroke of genius. I've personally bought six iPods for myself or as gifts. That said, I don't feel any real excitement about an iPod photo. A hard-drive–based digital music player was a no-brainer: everyone from baby boomers to teens owned a portable CD player. I just don't see the same need for a device that stores and transports photos.

EDWARD HO

I see two problems with a video iPod: the content availability you mentioned, and the screen. You can't comfortably watch a feature-length movie on a 2-inch screen. Perhaps something half the size of the 12-inch PowerBook would be welcome, provided it's also half the cost or less.

GAROLD POWELL

Apple should add more utility to the iPod photo before tackling the video market. Specifically, the company should optimize the iPod as a storage device for the new high-megapixel cameras. For someone in the field shooting at a high resolution, such an iPod would be a great (and relatively cheap) storage device—especially if you could then iSync the photos directly from the iPod to your Mac over an Internet or wireless connection. You'd shoot, store, iSync, delete, and start shooting again.

EDWIN CHAN

Should Apple do a portable video player? Yes! As a student filmmaker, I could use one to carry my movies wherever I go. I could just plug it into any screen and let people watch my short productions—it'd be an on-the-go reel.

Helpful Suggestions

WARD MUNDY

Two things I wish Mac developers would implement: I get really tired of trying to turn off my system, only to have it ask me whether I want to save the Clipboard's contents. I wish I could just select an option somewhere that would tell the Mac that I never want to save the Clipboard's contents before shutdown. (Or better yet, it could just save that stuff to disk by default. With today's multigigabyte drives, why not?) Second, how often do you send an e-mail message but forget to attach the attachment? Every e-mail client should be able to scan for the words *attachment* or *attached* in the body of an outgoing message; if it finds one of those terms in a message but doesn't detect an attachment, it should then ask you if perhaps you've forgotten something.

Lose the JPEGs

BYRON C. KORT

Your article "Picture Your Perfect Camera" (January 2005) neglected to point out just how lossy JPEG files are. Depending upon compression, JPEGs throw away between 30 and 95 percent of the pixels that the camera captures. After reading your article, many buyers might think they could blow up JPEG images without losing image quality. But you can do that only with Raw or TIFF images.

OS 9 Debate Continues

MATTHEW THOMPSON

In the article "So Long, OS 9" (*Mac Beat*, January 2005), Glen Turpin of Quark claims that OS X offers "access to the lower levels of the system, which enables us to provide a quicker application." Ha! I work in catalog production, and most of my team still uses XPress 4.11. I can tell you from daily experience that XPress 4 running in Classic mode *easily* outpaces XPress 6 in every task, from opening and closing a document to printing and creating PDFs. Perhaps *Macworld* should run some benchmark tests to check Quark's claim.

More Web Tips

PHIL MAHLER

You didn't mention my favorite new tip for searching the Internet in your "Untangle the Web" article (December 2004): when you want to learn how to do something (for example, how to perform

red-eye reduction in Photoshop), add the word *tutorial* to your search. Following that example in Google, you'd enter `"red-eye reduction" Photoshop tutorial` for a tutorial on that subject.

Virtual Lockout

JAMES KERWIN

Robert Ellis's review of Microsoft Virtual PC 7 (♦♦♦♦; January 2005) left out one major drawback that the new version has: users with DSL connections that don't have static IP addresses can't access certain Web sites from virtual machines. In version 6, Connectix (the program's former developer) solved this problem by providing an AppleScript that allowed the user to switch between Shared Packet and Shared Socket networking. Microsoft omitted this script in version 7, making it impossible for a great many Virtual PC users to visit the company's own Web site, among others. (The version 6 script is not compatible with the new version.) To date, Microsoft has offered neither an explanation nor a promise of a fix.

Blatant Self-Promotion

JIM KANE

Even in this "everything's-on-the-Web-already-so-why-would-I-need-a-print-magazine?" era, print magazines such as *Macworld* are still useful. I've subscribed since 1985, and reading each issue cover-to-cover is still a high priority for me. Although I keep up with current Mac events on the Web, I invariably learn something new—several new things, in fact—from each issue of *Macworld*. I value good writing, good editing, and attractive presentation—always have—and I find those attributes in spades inside every issue of *Macworld*. They're much harder to come by online.

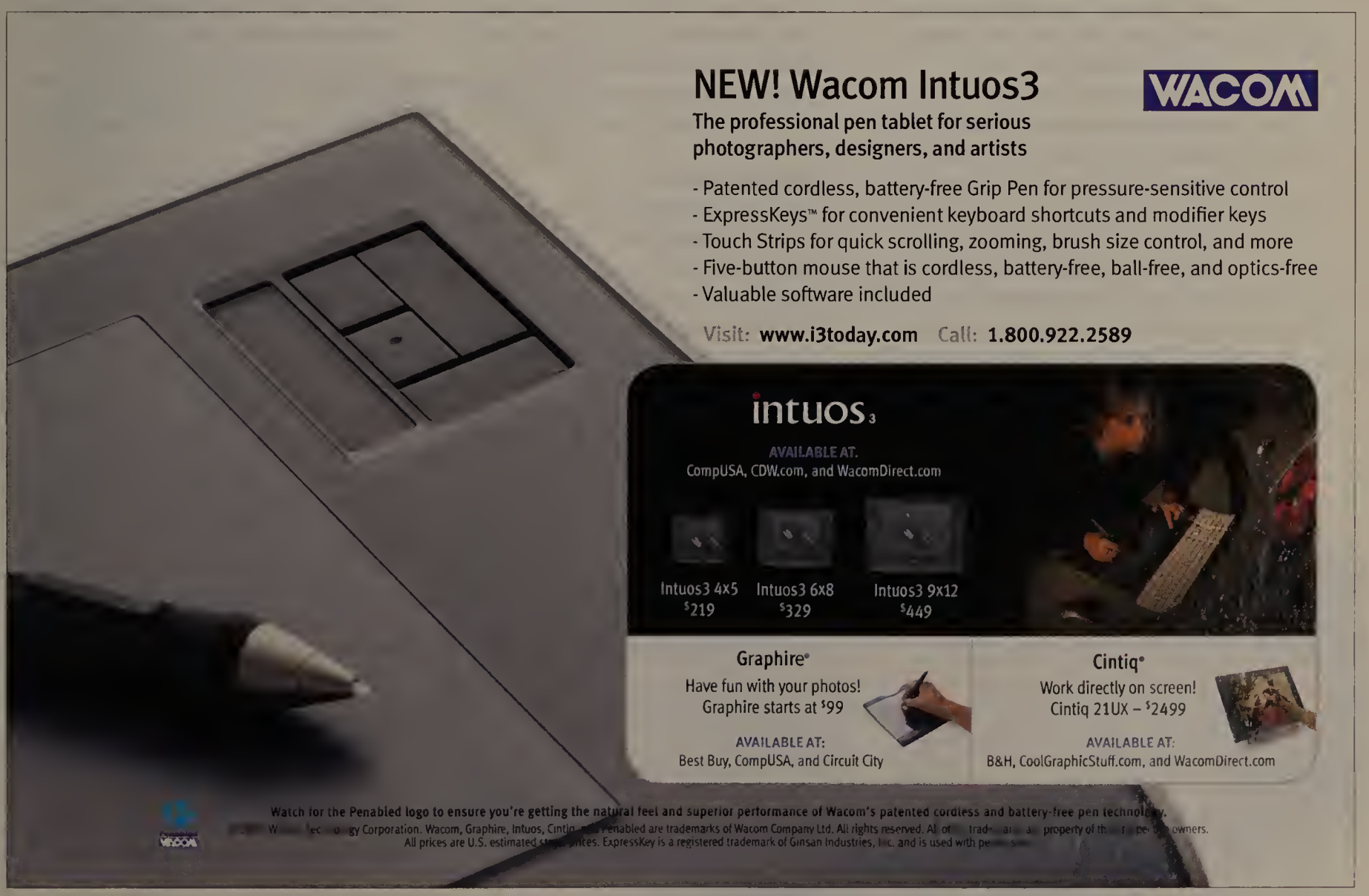
PETER N. LEWIS

I got my first Mac and my first issue of *Macworld* in February 1984, less than a month after the now famous Super Bowl ad had aired. I still have both. I find something useful in every issue of your fine magazine, but the January 2005 issue has outdone them all. By the time I was finished tearing out the articles I needed, articles I wanted to give to my clients, and articles I wanted to file, there was darn little left for landfill. Now that's conservation. Maybe you should just perforate the pages at the binding.

CORRECTIONS

In "Inside the iPod Photo" (*Digital Hub*, February 2005), we stated that the iPod photo wouldn't fit in the Sonnet PodFreq. Sonnet has since announced a version that will hold the iPod photo.

Post comments on our forums (www.macworld.com); send them by mail to Letters, *Macworld*, 501 Second Street, 5th Floor, San Francisco, CA 94107; or send them by e-mail to letters@macworld.com. Include a return address and daytime phone number. Due to the high volume of mail we receive, we can't respond personally to each letter. We reserve the right to edit all letters and posts. All published letters and forum comments become the property of *Macworld*.



HOW DOES THE MAC MINI STACK UP AGAINST BARGAIN PCS?

Apples and Oranges

For years, people have criticized Macs for being more expensive than Windows PCs. The problem with that logic, however, is that Macs and PCs aren't usually configured the same. In fact, when you compare similarly equipped Macs and brand-name Windows PCs, the difference in price is negligible (or nonexistent). So legitimate price comparison has been lost on many tech pundits and analysts—as has the fact that Macs generally come with an excellent software bundle unmatched on budget PCs.

One of the rebuttals to this argument has always been "Well, what if I don't want all the extra features that come with the Mac? What if I just want a cheap, limited computer?" And it was a valid point—until Apple announced the $499 Mac mini (www.apple.com) and undercut that argument something fierce. But the mini didn't silence the skeptics.

Soon after the announcement of the Mac mini, popular investment site The Motley Fool (www.fool.com) had this to say: "Mac fans who've been sipping Steve's Kool-Aid have often claimed that price—in addition to various Microsoft conspiracies—is the only thing keeping the masses from switching to their favorite brand, but take heed. Even if that were true, a quick online check shows you can get a comparable, full Dell system for $450."

ExtremeTech (www.extremetech.com) put this position most succinctly: "Let's not get too carried away about the 'cheap' Macintosh. It's cheap relative to past Apple systems, but you can still get a complete Wintel system for considerably less."

Can you? I decided to find out, using everyone's favorite budget-PC maker, Dell (www.dell.com), as a point of comparison (see "Mac and PC: Side by Side" for details).

Peeled Back

The $399 Dell Dimension includes a monitor—worth $45, according to Dell—and a keyboard-and-mouse bundle that I value (generously) at $20. So let's take those away to make the Dell more equivalent to the Mac mini and give it an even better apparent price: $334. Now check out those specs—do these computers really look comparable to you? What does $334 actually get you from Dell, as compared with what Apple's $499 Mac mini provides?

> Both computers include only 256MB of RAM, but the Dell memory is shared between the computer and the video card. (Dell says that between 32MB and 64MB of that RAM will be used for video, leaving you with between 192MB and 224MB for the operating system and all applications, even though the company recommends between 512MB and 1GB of RAM if you want to "run several programs at once or plan to edit photos.") The Mac mini has a faster, AGP video chip with dedicated memory. You can upgrade the Dell's video card for more money, but only with a PCI card (there's no AGP slot).

> The Dell includes a DVD-ROM drive, which reads DVDs but can't burn anything. An $18 upgrade lets you burn CDs, but then you lose the ability to play DVDs. Want to be able to do both? You'll have to pay $53 for a second optical drive (Dell doesn't offer a combination drive). An experienced user could do an aftermarket upgrade for less, but the target audience for these computers isn't going to be swapping drives from Fry's. The Mac mini includes a DVD-reading and CD-burning Combo drive.

> FireWire is not included on the Dell, nor is it an option. The Mac

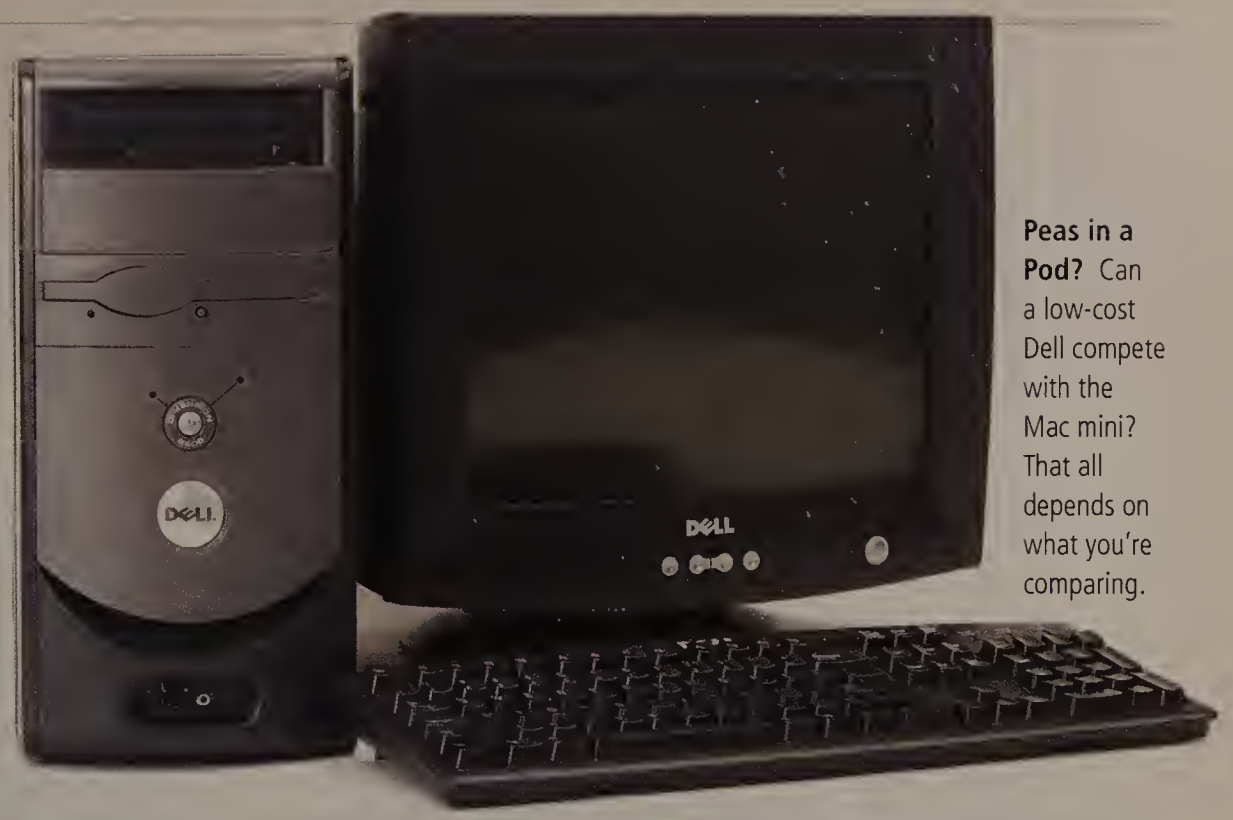
MAC MINI PHOTOGRAPH BY PETER BELANGER

mini—like all other Macs—includes FireWire, which is useful for digital video editing (most DV camcorders don't have USB 2.0 ports), as well as for keeping your USB ports free for a keyboard, a printer, and so on.

> The Dell comes with a 90-day warranty, compared with Apple's one-year warranty.

> The Dell runs Windows XP Home Edition, not quite comparable to Mac OS X. (I'm not talking Windows versus Mac here, I'm talking Windows XP Home versus Windows XP Professional—Pro is a better OS than Home.) Granted, some home users won't take advantage of Pro-only features, but others will. And since we're trying to compare what you actually get for your money with these systems, it's only fair to point out that the Dell doesn't include XP Pro, whereas the Mac mini comes with the same OS found on Apple's high-end Power Mac G5.

> What about software? The Dell gives you a word processor (WordPerfect), trial or starter versions of two apps, and Dell Jukebox. The Mac mini bundle includes software such as Quicken 2005 and the newest version of the iLife suite, worth half as much as the Dell's hardware alone.



Peas in a Pod? Can a low-cost Dell compete with the Mac mini? That all depends on what you're comparing.

Out of the box, the Mac mini can do just about anything a home user might need it to do. Neither system comes with antivirus software, which isn't a big deal for the Mac but is for a Windows PC. These days, using a Windows machine without antivirus software is like driving a car without brakes—you just start it up and pray.

Pared Down

To recap, in order to be somewhat comparable to the Mac mini, the Dell computer needs a better video card, an optical-drive update, FireWire, Windows XP Pro, a longer warranty, and a much better software bundle.

Does the Dell have any hardware advantages? Its larger case does include three PCI slots for expansion. But let's be realistic here: how many people in the market for a sub-$500 computer are ever going to add a PCI card (besides the ones who realize they need a FireWire port to connect a DV camcorder)? Some might point to the Dell's faster processor, but it's a Celeron (Intel's budget processor), which means that it's nowhere near as fast as its Pentium 4 siblings. I call it a wash—both these machines are underpowered for advanced users, but both will suffice for their target market. The Dell does have more USB ports, but they share the same (or fewer—Dell hasn't confirmed with me) number of buses you'll find on the Mac mini, which means that the Dell simply has a $10 hub built-in. The Dell's biggest hardware advantage is that it has a faster hard drive; whether the target market for this computer will realize any benefits from this advantage is debatable.

Now there are numbers in this comparison that an ardent Dell fan—or Mac fan, for that matter—will quibble with, and this comparison, intended for a typical home user, isn't going to be perfect for everyone. (There's also the fact that Dell's prices apparently vary by the minute, and you may get a different price depending on which of the four Dell online stores you go through.) But the overall point is clear: when you attempt to configure even the cheapest Dell *comparably*, it's no longer cheaper than the Mac mini.

And then there are the intangibles the Mac mini has in its favor: no viruses; no spyware; easier setup of peripherals; a much smaller, more attractive, and quieter enclosure (6.5 by 6.5 by 2 inches and 3 pounds for the Mac mini; 14.5 by 7.3 by 16.8 inches and 23 pounds for the Dell Dimension 2400); and lower power consumption (85w maximum for the Mac mini, 250w maximum for the Dell). These attributes are worthwhile to many buyers.

Let's be honest: some people will be better served by a Windows PC. But if the buying decision comes down to price, the only way to make a truly informed decision is to look further than the price tag, comparing what is included—and just as important, what isn't. You really do get what you pay for.—DAN FRAKES

MAC AND PC: SIDE BY SIDE

Model	Mac mini	Dell Dimension 2400
Price	$499	$399
Processor	1.25GHz PowerPC G4	2.4GHz Intel Celeron
RAM	256MB	256MB
Graphics	ATI Radeon 9200 (32MB of dedicated VRAM)	integrated Intel Extreme Graphics (uses system RAM)
Hard drive	40GB (4,200 rpm)	40GB (7,200 rpm)
Optical drive	slot-loading Combo drive (DVD-ROM/CD-RW)	DVD-ROM (read-only)
FireWire	one FireWire 400 port	none
USB	two USB 2.0 ports	six USB 2.0 ports
Ethernet	10/100BaseT	10/100BaseT
Modem	56 Kbps v.92	56 Kbps PCI data fax
Wireless	AirPort Extreme– and Bluetooth-ready	can be added via USB or PCI
Audio	audio out	integrated audio
OS	Mac OS X 10.3	Windows XP Home Edition
Software	stock OS X apps, iLife '05, AppleWorks, Quicken 2005, Nanosaur 2, Marble Blast Gold	Internet Explorer, WordPerfect, Paint Shop Pro Studio trial, Photo Album Starter Edition, Dell Jukebox, Acrobat Reader 6.0
Warranty	one year	90 days
Display	none	17-inch Dell E773c CRT
Keyboard and mouse	none	Dell keyboard and mouse

APPLE MAKES POWERBOOKS FASTER, ADDS FEATURES, LOWERS PRICES

Speedy 'Books

Road warriors take heart: Apple hasn't forgotten about you. No, there isn't a PowerBook G5 yet—but that doesn't mean the company has stopped working on its powerful laptops. In fact, Apple has refreshed the entire PowerBook G4 line to make them faster and more powerful, and in most cases, it has lowered prices.

Top processor speeds in the PowerBooks have increased from 1.33GHz to 1.5GHz on the 12-inch models, and from 1.5GHz to 1.67GHz on the 15-inch (with SuperDrive) and 17-inch models (for all specs, see "Laptops of Luxury"). Hard drives now come in 60GB, 80GB, and 100GB sizes (the max was 80GB previously), and every hard drive in the new PowerBooks has a rotation speed of 5,400 rpm, up from 4,200 rpm on some of the previous drives. But perhaps the biggest hard-drive improvement is Apple's new Sudden Motion Sensor technology, designed to protect the PowerBook's internal hard drive:

"Our system senses if the PowerBook has been dropped and parks the disk drive's heads and locks them before the PowerBook hits the floor," says David Russell, Apple's senior director of portables and wireless marketing.

Inside Changes

Addressing a major complaint of Apple customers—especially those with harder-to-upgrade laptops—all PowerBooks now come standard with 512MB of RAM (with the same DDR333 speeds as in previous models). In addition, the 512MB populates a single RAM slot on the 15- and 17-inch models. Previously, people who ordered systems with 512MB preinstalled at the factory would find the PowerBook's two SO-DIMM slots occupied by two 256MB memory modules. Now one SO-DIMM slot remains open—simplifying the process of upgrading to more RAM. The 15- and 17-inch PowerBooks can be upgraded to 2GB of total RAM, whereas the 12-inch models keep their one SO-DIMM slot configuration with memory upgrades available to 1.25GB.

Standard on all new PowerBooks is 3-Mbps Bluetooth 2.0+EDR (Enhanced Data Rate), which provides three times the bandwidth of Bluetooth 1.2 (and is backward-compatible). Apple claims that it's the first notebook maker to integrate Bluetooth 2.0 on its computers.

In addition, all models ship with built-in 54-Mbps AirPort Extreme wireless cards, and DVD-burning models now have 8× SuperDrives (up from 4× in previous models).

And good news for people who like to connect their PowerBooks to external monitors: the new 17-inch model now features Dual Link support through its Digital Visual Interface (DVI) monitor connector, which makes it the first PowerBook that can drive Apple's 30-inch Cinema HD Display.

Outside Improvements

Externally, Apple has made a few notable changes to the PowerBook line. First, there's a new scrolling trackpad that lets users touch two fingers to the trackpad to scroll quickly through long documents or pan within the window.

Second, all 15- and 17-inch PowerBooks now feature backlit keyboards, and they're up to 10 times brighter than those of previous models. "We're using a new technology to illuminate the bottom side of the keyboard," says Russell. The new PowerBooks are available now. The 12- and 17-inch models are $100 cheaper, the high-end 15-inch model is $200 less, and the other 15-inch model retains the same price as before.—PETER COHEN

LAPTOPS OF LUXURY

MODEL	PRICE	PROCESSOR	INSTALLED RAM/ MAXIMUM RAM	HARD-DRIVE CAPACITY	OPTICAL DRIVE	GRAPHICS PROCESSOR/RAM
12-inch PowerBook G4	$1,499	1.5GHz	512MB/1.25GB	60GB	Combo drive	Nvidia GeForce FX G0 5200/64MB
12-inch PowerBook G4	$1,699	1.5GHz	512MB/1.25GB	80GB	8× SuperDrive	Nvidia GeForce FX G0 5200/64MB
15-inch PowerBook G4	$1,999	1.5GHz	512MB/2GB	80GB	Combo drive	ATI Mobility Radeon 9700/64MB
15-inch PowerBook G4	$2,299	1.67GHz	512MB/2GB	80GB	8× SuperDrive	ATI Mobility Radeon 9700/64MB[A]
17-inch PowerBook G4	$2,699	1.67GHz	512MB/2GB	100GB	8× SuperDrive	ATI Mobility Radeon 9700/128MB and dual-link DVI

[A] 128MB SDRAM and dual-link DVI available as build-to-order options.

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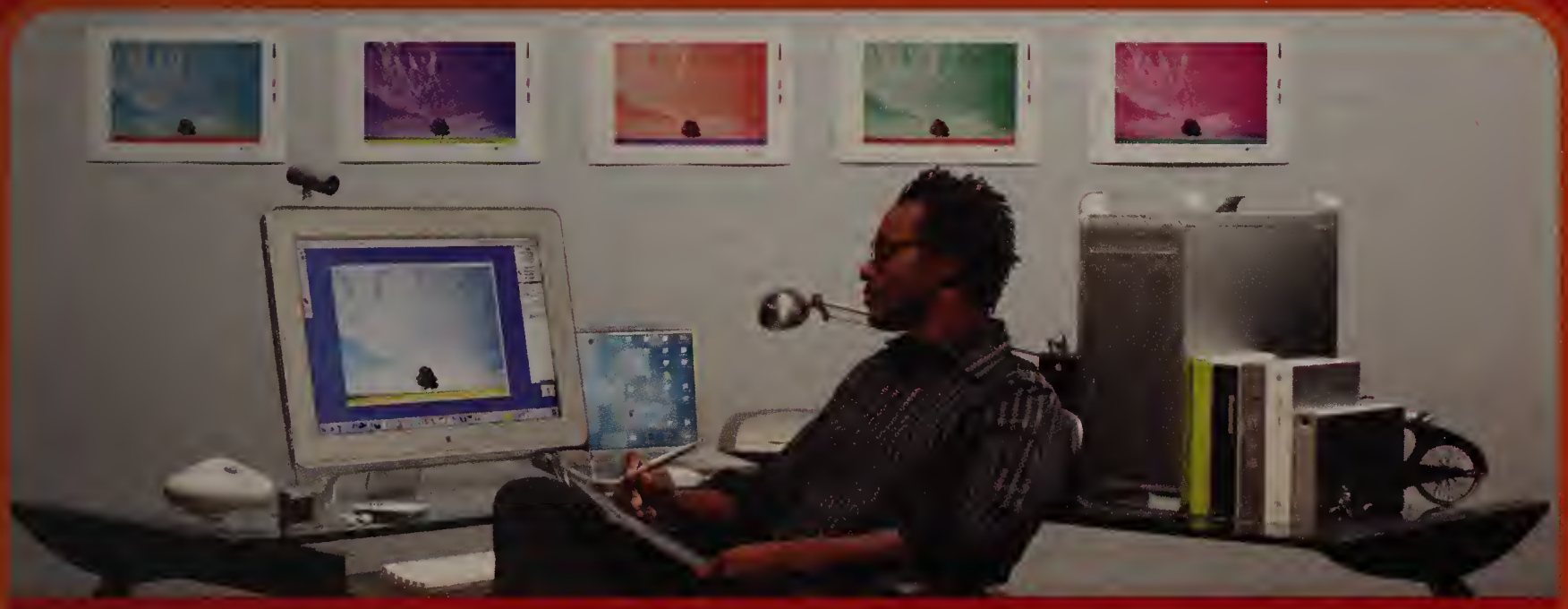

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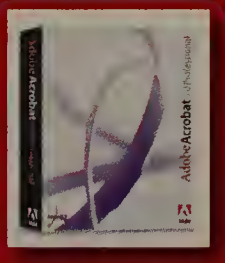

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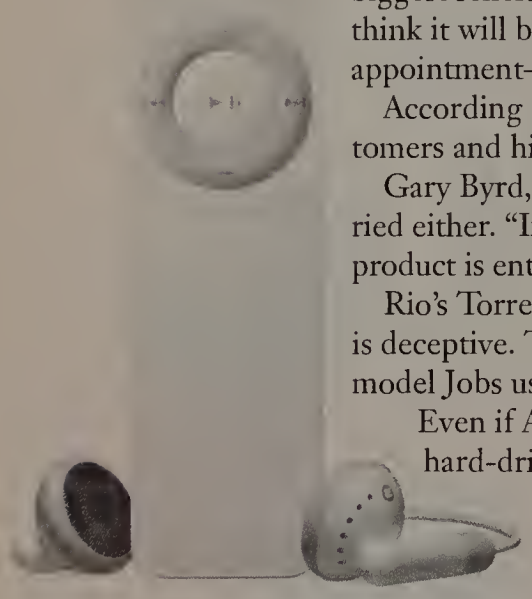
DIGITAL AUDIO VENDORS AREN'T AFRAID OF THE iPOD SHUFFLE

Quaking in Their Boots?

While hordes of people rushed over to the Apple Store to pick up the new iPod shuffle moments after Steve Jobs announced the product at Macworld Expo, the only thing competing digital audio vendors rushed to do was downplay the significance of the latest addition to Apple's iPod line.



"We have two reactions," says Dan Torres, vice president of product marketing for Rio, the first company to ship an MP3 player and still one of the biggest sellers in the market. "First, we welcome Apple to the flash space. I think it will be good for the market. Our second feeling is something of a disappointment—Apple shipped a somewhat neutered product."

According to Torres, players without user interfaces aren't popular with customers and historically haven't done very well.

Gary Byrd, spokesperson for iriver, another maker of MP3 players, isn't worried either. "In general, it's not seen as directly competitive, because [Apple's] product is entry-level. It doesn't have an interface or many other things."

Rio's Torres also says one of the iPod shuffle's main selling points—price—is deceptive. To get the same accessories offered by the Rio Forge Sport (the model Jobs used as a comparison), users will have to spend more money.

Even if Apple does go on to dominate the flash market (as it has with hard-drive players), that doesn't necessarily mean there isn't room in the pool for everyone.

"[The shuffle] will draw increased attention to the versatility and convenience of flash-enabled MP3 products," says Russ Ernst, senior product manager for GoVideo, sellers of the Rave-MP MP3 players.

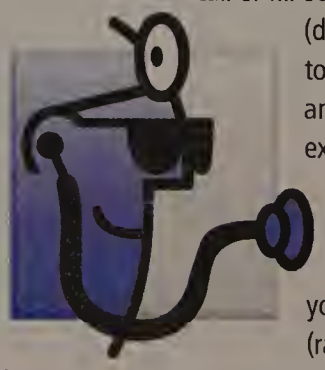
But Apple has proved that its products do stand out from—and have a tendency to crowd out—the rest. So that added attention may not be such a good thing for other companies after all.—MATHEW HONAN

DOCTOR MAC DIRECT MAKES HOUSE CALLS—VIA THE NET

The Doctor Is In

Perhaps the most frustrating part of technical support—other than waiting on hold—is getting someone to explain clearly how to solve your problem. A new service hopes to improve that experience with a different approach.

Doctor Mac Direct (877/376-2248, www.doctormacdirect.com), the brainchild of author and *Houston Chronicle* columnist Bob "Dr. Mac" LeVitus, is Mac-only support for Apple and third-party software—with a twist. In addition to normal phone support, Doctor Mac Direct also employs a Safari plug-in for broadband users that allows a technician to control your Mac remotely to fix a problem.



LeVitus got the idea for Doctor Mac Direct, which launched at the end of January, from the technical support he used to offer for his father. "Trying to instruct him by phone was an exercise in frustration," says LeVitus, "so I set up his iMac with a copy of Netopia's Timbuktu Pro remote-control software. Then I'd just take control of his keyboard and mouse and see what was going on for myself in real time."

Whether you have a question about Microsoft Word or need OS X migration support, you place a call or fill out an e-mail form. Within an hour (during normal business hours), Doctor Mac Direct matches you up with an expert with at least five years of experience (and hired by Czar of Technical Stuff and *Macworld* Contributing Editor Ted Landau), who'll call you with an estimate for fixing your problem. Whatever the estimate (rates start at $30 for 15 minutes), the company promises that if it takes longer than estimated, you won't be charged extra—and if Doctor Mac can't fix the problem, it won't charge you.

The Safari plug-in requires no configuration and can even work behind a firewall. And rest easy—the company requires your go-ahead each step of the way.—JONATHAN SEFF

PRODUCTIVITY BEAT

4D Meetings 1.0, from 4D (www.4d.com): Meeting and task-management system provides contact-management, group-creation, archive-storage, and report-generation capabilities (free).

LeadingReporter 1.0, from CS Odessa (www.leadingproject.com): Reporting tool for project managers generates business-event reports ($149).

OD4Contact 2, from Objective Decision (www.objective-decision.com): Updated personal information manager adds Communication Center module for sorting and filtering e-mails, phone calls, postal mail, and faxes by person, date, or type ($55; upgrade, free).

TopXNotes, from Tropical Software (www.tropic4.com): Note-editing and -organizing utility features the ability to add embedded links and create a unique setting for each user. It provides ten templates ($20).

xTime Project 3, from App4Mac (www.app4mac.com): Project-management software features new engine and user interface and adds support for managing multiple projects ($129; upgrade, free).

IMAGING BEAT

Dimage Z5, from Konica Minolta (www.konicaminolta.com): Five-megapixel camera offers 12× optical and 4× digital zoom, along with Konica's Anti-Shake system (contact Konica for pricing).

Dimage Z20, from Konica Minolta (www.konicaminolta.com): Five-megapixel camera features 8× optical and 4× digital zoom (contact Konica for pricing).

IconLab, from Zonic (www.zonic.co.uk): Photoshop plug-in allows users to export and import icon graphics ($25).

PowerShot A510, from Canon (www.canon.com): 3.2-megapixel camera features 3× optical zoom and a slot for SD storage cards ($200).

BEAT ICONS BY PAUL HOWALT

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HOTELS BEGIN OFFERING iPODS TO GUESTS

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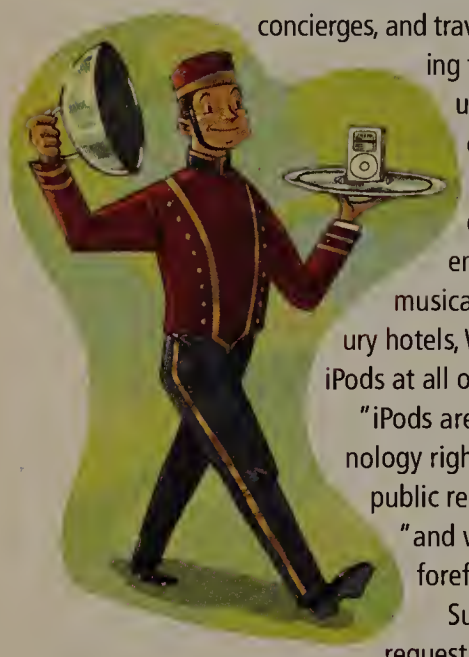

Guests at upscale hotels have become accustomed to 600-thread-count Egyptian-cotton sheets, pool concierges, and travel butlers. But the latest offering for travelers in search of the ultimate experience is even cooler: iPods.

Instead of the compact-disc players—and never enough CDs to satisfy every musical taste—once offered at luxury hotels, W Hotels Worldwide now has iPods at all of its locations.

"iPods are the epitome of cool technology right now," says Jane Glastein, public relations director for W Hotels, "and we see ourselves being at the forefront of that."

Suite guests at all W hotels can request an iPod, which is loaded with more than 50 songs from the W's handpicked Fantasy, Intrigue, Relaxation, Romance, and Sensuality iMixes from a variety of musical genres. (The San Francisco W has iPods in all of its suites, and the Los Angeles W has iPods available for use by the pool.)

Michelle Payer, a spokesperson for Ritz-Carlton hotels, says that the company's Key Biscayne, Florida, location will begin offering iPods this summer—a way to appeal to the sophisticated traveler.

"We will have ten of them and offer them at no charge," Payer says. "The music selection will be varied and guests can [purchase and] download extra tunes [from the iTunes Music Store] with our assistance."

Other hotels offering iPods include Rosewood Hotels & Resort (currently at Las Ventanas al Paraiso in Los Cabos, Mexico, and soon at Jumby Bay in Antigua), La Samanna Baie Lounge in Saint Martin, the Crescent Hotel in Beverly Hills, the One & Only Ocean Club in Los Cabos, and the Hard Rock Hotel in Chicago.—ADELIA CELLINI

ELEKTRON SECURES SMALL WI-FI NETWORKS

AirPort Protector

AirPort has changed the way many of us look at networking. One problem, however, is that wireless networks are relatively insecure. Their radio waves penetrate walls and spill out into the streets, and a ne'er-do-well with free software can sniff out your every move (even if you use encryption).

If you use Wi-Fi at home, you might not care. But for businesses, information is money. A Wi-Fi network is also a portal to less-protected computers that might not expect attacks from outside the network, or to file servers that are wide open.

Businesses now have an affordable way to turn on the highest level of Wi-Fi security, with Corriente Networks' $300 Elektron server software package (www.corriente.net). Normally, each computer on a network shares the same encryption key for connecting to the network. If that key is disclosed—on a sticky note, for example—or cracked, the network is wide open. Elektron offers individual Wi-Fi accounts with unique, long (read: hard-to-crack) encryption keys of the strongest variety now available, for an unlimited number of users.

Elektron takes advantage of WPA (Wi-Fi Protected Access) Enterprise, a method of allowing a central repository of user logins across many Wi-Fi base stations, whether on a local network or at remote offices. It's built on the 802.1X protocol—server software of this kind typically costs thousands of dollars.

When configured with any of Apple's base stations or most other Wi-Fi gateways, Elektron accepts connection requests, validates information, and assigns each person a key. Users cannot access the network until the Elektron server gives permission via the Wi-Fi gateway.

With Elektron, IT administrators can delete user accounts if information is revealed or when employees leave, instead of modifying every computer on the network. Preventing that hassle alone may be worth the money.—GLENN FLEISHMAN

MULTIMEDIA BEAT

Combustion 4, from Discreet (www.discreet.com): Desktop compositing software adds Diamond Keyer, custom capsules, a merge operator, and enhanced paint functions ($995; upgrade, $249).

GuitarPlug, from MacMice (www.dvforge.com): USB audio device features a quarter-inch guitar plug and converts an analog signal to a 16-bit 48kHz USB audio signal compatible with Apple's GarageBand or Logic ($50).

iStabilize 2.0, from Pixlock (www.istabilize.de): Video-stabilization software adds a redesigned motion tracker that's faster and more accurate than its predecessor ($59; upgrade, $24).

Kontakt 2, from Native Instruments (www.ni-kontakt.com): Updated sampler software features new sampling engine with unlimited polyphony and 64-part multitimbrality ($579; upgrade, $169).

MX4 2.0, from Mark of the Unicorn (www.motu.com): Hybrid synthesis engine adds phaser, flanger, and reverb effects, as well as hundreds of new presets ($295; upgrade, free).

ThemePak and **ButtonPak**, from DVDThemePak.com (www.dvdthemepak.com): Collections have been updated for Apple's iDVD 5.0 ($29–$49).

INTERNET BEAT

Captain FTP 4.0, from XNet Communications (http://captainftp.xdsnet.de): Updated FTP client adds the ability to open new FTP connections in tabs within a single window, as well as built-in viewers for video, audio, image, and PDF files ($25; upgrade, free with upgrade protection or $19).

Net Tool Box 3.0, from Charlie Boisseau (www.nettoolbox.net): New version of networking utilities suite adds network statistics tracking, an SMTP tool for sending e-mail, and the ability to better filter network traffic (£20 [about $38 at press time]).

BEAT ICONS BY PAUL HOWALT; ILLUSTRATION BY DAN SANTAT

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GUITAR MAKER GIBSON UNVEILS ETHERNET AXE

Les Paul Goes Digital

In a quiet meeting room at January's NAMM (National Association of Music Merchants) music trade show in Anaheim, California, Henry Juszkiewicz opens a guitar case to reveal the future of Gibson instruments—the digital guitar (www.gibsondigital.com).

"Guitar players have a love affair with their guitars," says Juszkiewicz, Gibson's CEO. "To date, technologies have missed the mark—a great technology enhances your life, and our design philosophy was to make it invisible to the player."

Carrying the familiar Les Paul name and style, the new instrument, which has been 11 years in the making, is both a traditional guitar with a ¼-inch analog plug and a digital guitar with an Ethernet port. Looking at the guitar from the front, you would never guess that Gibson had been able to fit 1,100 extra components behind the jack plate.

The Hex Pickup in the digital guitar captures a separate signal for each string and sends it to the onboard digital converter, which uses Gibson's MaGIC digital transport technology to send the signal out of the guitar via the Cat-5 Ethernet cable. The cable is capable of carrying the signal 100 meters with no latency issues or loss of quality, according to Juszkiewicz. Plug the cable into the included Breakout Box, which converts the digital information back to analog, and you can then monitor, record, place, or customize the sound of each string individually—something you can't do with a traditional guitar.

Gibson has made plans for future technology updates: Juszkiewicz says the entire board that controls the digital part of the guitar can be replaced, effectively updating the instrument with the newest technology from Gibson.

"It will definitely be for the bleeding-edge player," says Juszkiewicz. "It is indeed the future of Gibson and the industry."—JIM DALRYMPLE

SAN FRANCISCO BAND REPLACES DRUMS WITH A PAIR OF iBOOKS

Sans Skins

Including computers in a band setup is nothing new, but San Francisco's LunaGroove (www.lunagroove.com) has gone one step further—completely replacing a traditional drum kit with two iBooks.

Alex Theory, who runs the Macs on stage, uses two 1GHz iBooks to power the band's drums and the overall feel of the music. Using Ableton's Live, Propellerhead Software's Reason, and Digidesign's Pro Tools, Theory mixes and assigns beats to his iBooks' keyboards, changing beats on-the-fly depending on the mood of the crowd.

"We are completely interactive and fluid with the audience," says Theory. "We have taken what a DJ does and incorporated it into a band."

The band's guitarist, Jimmy Leslie (who doubles as a music journalist), says that with Theory setting the beat, the band can quickly transition what it's doing based on the vibe it gets from the people—without having to stop. Leslie still rips out solos, as any good jam-band guitarist should, but the overall feel is different.

"People still love guitar solos, but they are just tired of hearing it done the same old way," says Leslie.

According to Leslie, LunaGroove differs from others who have tried to use computers onstage because the band's sound isn't too electronic, and it's not trying to make traditional instruments sound electronic. LunaGroove's approach is to incorporate the effects seamlessly into the music.

"The way the band works is like a futuristic jazz trio," says Leslie.—JIM DALRYMPLE

CREATIVE BEAT

Maya 6.5, from Alias (www.alias.com): Update to 3-D–modeling, –animation, and –rendering program has been optimized for improved performance and includes scene-segmentation and Step translator features (Maya Complete, $1,999; upgrade, $899; Maya Unlimited, $6,999; upgrade, $1,249).

Vue 5 Infinite, from E-on Software (www.e-onsoftware.com): Software for creating natural 3-D environments offers all the features of Vue 4 Professional along with EcoSystem technology for populating scenery with animated plants, rocks, and objects ($599; upgrade, $199).

Vue 5 Pro Studio, from E-on Software (www.e-onsoftware.com): Software combines E-on's Vue 5 Esprit 3-D–imaging and –animation program with the Botanica, LightTune, DeepAccess, and Mover 5 add-on modules ($399; separate pricing available for Vue 5 Esprit and modules).

STORAGE BEAT

Drive Genius, from ProSoft Engineering (www.prosofteng.com): Suite of utilities optimizes, rebuilds, tests, benchmarks, initializes, partitions, and duplicates hard drives ($99).

Mahana II FW800, from TikiMac (http://kahuna.tikimac.com): External hard drive featuring a pair of FireWire 800 ports and FireWire 400 and 800 cables comes in 500GB–1.2TB capacities ($439–$1,289, depending on capacity).

Mercury On-the-Go, from Other World Computing (www.macsales.com): Portable 2.5-inch external hard drive with a 5,400-rpm mechanism now comes with a 100GB capacity ($320).

Thunder Pro A/V, from EZQuest (www.ezq.com): Line of external hard drives features three FireWire 400 ports and comes in 160GB–400GB capacities ($249–$699, depending on capacity).

BEAT ICONS BY PAUL HOWALT; LUNAGROOVE PHOTO COURTESY OF LUNAGROOVE

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REVIEWS

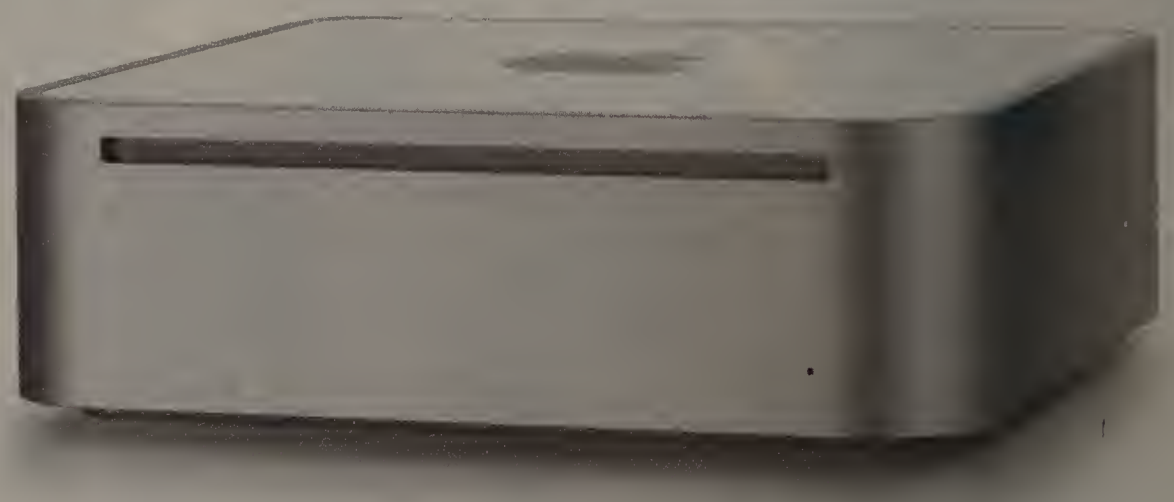
OUTSTANDING: ★★★★★
VERY GOOD: ★★★★
GOOD: ★★★
FLAWED: ★★
UNACCEPTABLE: ★

Reviews you can trust: Macworld rates only final shipping products, not prototypes. What we review is what you can actually buy.

Mac Mini

Perfect Bookshelf Box for Mac Minimalists

BY JENNIFER BERGER



When Steve Jobs unveiled the Mac mini at Macworld Expo in January, the reaction was a mix of amazement at its tiny size and uncertainty about whether a high-quality Mac could be housed in such a small box. After all, Mac veterans haven't forgotten the ill-fated Power Mac G4 Cube, Apple's other diminutive desktop Mac.

But the Mac mini is different. It's a standalone box designed for regular folks who want to do basic tasks, and it costs as little as $499. It may just be the perfect upgrade for many Mac users, as well as Windows-to-Mac switchers who already have monitors, keyboards, and mice.

We've given the Mac mini a thorough going-over (see "Inside the Mac Mini," page 52, for more details)—and we can now report that although it has flaws, such as an unacceptably tiny amount of RAM, many people will find it to be the perfect Mac.

The Setup

Taking the Mac mini out of its box is a one-handed operation, since the computer weighs about 3 pounds, has a mere 6.5-inch-square footprint, and is 2 inches high. An elegant brushed-aluminum box with curved corners, it can stand flat or on its side. The rubberized bottom guards against slipping and raises the Mac mini up off your desk so air moves out of the unit. Like the iPod, it has an easily scratched white Lucite top.

Connecting a display is quick work: the DVI outlet can work with a VGA monitor, and you can also use Apple's $19 DVI-to-video adapter to watch slide shows and movies on a TV.

The back of the mini offers a row of air vents, the power button (which can be a little hard to find when you reach behind the mini), a headphone and audio-out port, an Ethernet jack, a modem jack, a power-adapter slot, and a security slot. The Mac mini has only two USB 2.0 ports, and you'll have to connect (daisy-chain) multiple FireWire devices to one another if you want them to access the mini's sole FireWire 400 port at the same time. The only port some people will miss is an audio-in.

Mini Choices

The Mac mini comes in two configurations: the $499 model has a 1.25GHz G4 processor, 256MB of RAM, a 40GB hard drive, and a Combo drive (CD-R, CD-ROM, DVD-ROM). The $599 model has the same specs as the $499 model, except it has a 1.42GHz processor and an 80GB hard drive. The price will climb quickly if you opt for extras such as 512MB of RAM for $75, a 4× SuperDrive for $100, Bluetooth for $50, and an AirPort Extreme card for $79 (or both wireless options for $99). The standard hardware may sound sparse, but the mini's software bundle is well rounded. It includes iLife '05 and other Apple apps, such as Mail, Address Book, and iCal. These really add value to the package.

Apple also includes 90 days of free phone support and a one-year limited warranty, extendable to three years if you purchase the $149 AppleCare Protection Plan.

Decent Performer

Although the Mac mini is a desktop machine, many of its components—the hard drive, optical drives, processor, and graphics card—match those in the iBook G4. So don't expect the same kind of performance from this machine that you get from an eMac or iMac (see the benchmark). In fact, our test results showed that the 1.25GHz Mac mini was slower overall than a 1.25GHz eMac G4.

We used the mini with 512MB of RAM for hours and were very happy with its speed and responsiveness, but with only the stock 256MB DIMM, performance seemed very sluggish. You can upgrade the mini's RAM, but there's only one DIMM slot, so you'll

Macworld	Speedmark 3.3	Adobe Photoshop 8.0	Cinema 4D XL 8.5	Compressor	Finder	iMovie HD	iTunes 4.7	Unreal Tournament
	OVERALL SCORE	SUITE	RENDER	MPEG-2 ENCODE	DUPLICATE FILE	RENDER	MP3 ENCODE	FRAME RATE
Mac mini G4/1.25GHz	117	2:31	5:26	15:03	0:41	1:27	2:50	17.2
Mac mini G4/1.42GHz	123	2:12	4:52	13:56	0:51	0:59	2:32	17.5
eMac G4/1.25GHz	*129*	*2:14*	*5:28*	*14:04*	*0:26*	*1:05*	*2:53*	*16.4*
iMac G5/1.6GHz	***153***	***2:06***	***3:25***	***11:10***	*0:33*	***0:45***	***2:04***	***34.7***
	>Better	<Better	<Better	<Better	<Better	<Better	<Better	>Better

BEST RESULTS IN **BOLD**. REFERENCE SYSTEMS IN *ITALICS*.

Speedmark 3.3 scores are relative to those of a 1GHz eMac G4, which is assigned a score of 100. Adobe Photoshop, Cinema 4D XL, Compressor, Finder, iMovie, and iTunes scores are in minutes:seconds. All systems were running Mac OS X 10.3.7 and had 512MB of RAM. The Photoshop Suite test is a set of 14 scripted tasks using a 50MB file. Photoshop's memory was set to 75 percent and History was set to Minimum. We used Compressor's Fast Encode preset. We duplicated a 500MB file in the Finder. We tested MP3 encoding with an audio-CD track that was 45 minutes long, converting it from the hard drive using iTunes' High Quality setting. We used iMovie to export a movie that was 1 minute and 40 seconds long to QuickTime: Email. We used Unreal Tournament's Antalus Botmatch average-frames-per-second score; we tested at a resolution of 1,024 by 768 pixels. For more information on Speedmark 3.3, visit www.macworld.com/speedmark.—MACWORLD LAB TESTING BY JAMES GALBRAITH

PHOTOGRAPHY BY PETER BELANGER

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need to buy a 512MB DIMM to replace the 256MB one.

We encountered one surprise when we tested the hard-drive–access speed. The 1.25GHz Mac mini beat the 1.42GHz model by 10 seconds because the 1.25GHz model's 40GB drive runs at 5,400 rpm, not the 4,200-rpm speed indicated in Apple's specs. The 1.42GHz model's slower 80GB drive did run at 4,200 rpm. (Note that Apple could ship minis that are true to spec at any time.)

Other components worked as expected. AirPort reception is good, and the mini is relatively quiet. Not surprisingly, the mini's built-in speaker is weak, so you'll want to connect external speakers or headphones. In our many hours of testing, the Mac mini did not generate much heat, probably due to its well-designed venting system and external power brick.

Macworld's Buying Advice

The Mac mini is a stellar bargain if you want a tiny machine that lets you do basic tasks. It's especially attractive if you already have the necessary peripherals. For a power user, it can be a monitorless e-mail, Web, or file server with remote-control applications. Only you can decide whether the 1.42GHz model's faster processor and 40GB of additional storage are worth another $100. If you don't have all the external pieces, we recommend that you look at the excellent 17-inch iMac G5/1.6GHz (♦♦♦♦; December 2004, find .macworld.com/ 0172), priced at $1,299.

MAC MINI G4/1.25GHZ
RATING: ♦♦♦♦
PROS: Small and light; good video-out options; excellent design; fast enough for basic tasks.
CONS: Doesn't come with enough memory; hard-to-find power button on back of unit; performance not as good as similar, larger Macs; no audio-in port.
PRICE: $499
COMPANY: Apple Computer, www.apple.com

MAC MINI G4/1.42GHZ
RATING: ♦♦♦♦
PROS: Small and light; good video-out options; excellent design; fast enough for basic tasks; large hard drive.
CONS: Doesn't come with enough memory; hard-to-find power button on back of unit; no audio-in port.
PRICE: $599
COMPANY: Apple Computer, www.apple.com

iPod Shuffle

Smallest, Most Affordable iPod Is a Very Big Deal

BY CHRISTOPHER BREEN

Not content to dominate just the middle and the high end of the portable–music-player market, Apple is now after the low end, too—with the iPod shuffle, the smallest and most affordable iPod yet. Available in 512MB (some 120 songs) and 1GB (240 songs) versions, for $99 and $149, respectively, the shuffle is the only iPod that lacks a display.

Play

The iPod shuffle sounds as good as any iPod, but it's about the size and weight of a pack of gum. The controls are responsive and reasonably intuitive. There's no hard drive, so skipping isn't a concern.

Apple's tiniest iPod communicates via three LEDs: On the front, a status light blinks green when you plug the shuffle into a USB port or click on the play/pause button. Another blinks orange when you disable the buttons. On the back of the device, the battery-status button's LED gives you a general idea of the remaining battery charge. I wish there were an indication of when you'd reached the midpoint of your charge. Apple promises at least 12 hours of play time, but my 512MB shuffle played for more than 17 hours on a single charge—impressive.

Control

An iPod just isn't an iPod without some kind of Click Wheel controller, and the iPod shuffle is no exception. The device has a play/pause button in the middle of a four-way clickable ring that offers volume-up, volume-down, fast-forward/next, and rewind/back controls.

On its back, the iPod shuffle has a simple, three-position toggle switch that turns the iPod off, plays its playlist in order, or flips it into Shuffle mode to play songs randomly. A green stripe helps you see the switch's position, but it's too easy to slip into Shuffle mode. And the only way to tell whether the iPod shuffle is playing is to plug headphones in.

When you pull the far-too-easy-to-lose cap from the tip of the iPod shuffle, you'll see a USB connector for linking it to a computer or an optional power adapter ($29). USB is convenient because you don't have to carry a cable; however, without the optional power adapter, you must charge the shuffle with a computer. Also, the USB connector won't fit on some Macs. Apple accessories can help, but they're expensive, compared with the shuffle.

iTunes Additions

Unlike other iPods, the iPod shuffle can't play uncompressed AIFF or Apple Lossless files, which consume a lot of storage space (though it can play uncompressed Windows WAV files). By default, iTunes converts AIFF and Apple Lossless files to 128-Kbps AAC files.

iTunes 4.7.1 has a new Autofill feature that picks songs from your iTunes music library or from a designated playlist. The shuffle doesn't support iTunes EQ settings but does support start- and stop-time settings. The shuffle will play audiobooks, but iTunes' Autofill function won't automatically add them to the shuffle.

Macworld's Buying Advice

The iPod shuffle is designed for people who want the convenience of throwing a subset of their music collection onto a $99 or $149 device that doesn't skip, sounds good, and plays their favorite tunes at the press of a button.

RATING: ♦♦♦♦½
PROS: Inexpensive; good sound; good battery life; easy iTunes controls.
CONS: No display; LEDs can be cryptic; connecting to some computers requires add-on accessories.
PRICE: 512MB model, $99; 1GB model, $149
COMPANY: Apple Computer, www.apple.com

Photo-Storage and -Viewing Devices

New Class of Photography Hardware Makes a Big Splash

BY JACKIE DOVE

Until recently, the best way to make sure you didn't lose your freshly shot digital photos was to keep a PowerBook strapped to your side so you could wipe your memory card, view your images, and organize your work. Other options included buying additional memory cards and using an iPod as a storage device. None were optimal solutions.

Handheld storage-and-playback devices—a new product genre—are designed for professional photographers and go a long way toward solving this problem. Part massive hard drive and part high-quality photo viewer, these devices feature gigabytes of storage space, high-quality LCD screens, and video-out connections for viewing images on a TV without the need of a computer. Some even let you crop and print without using your Mac, and some can play music and video files.

I tested three of these new products: Epson's P-2000, Nikon's Coolwalker MSV-01, and SmartDisk's FlashTrax. All these players can display JPEG and some Raw image formats, and all support USB 2.0 for speedy uploading and downloading of image files to your computer. Each sports a large, bright LCD screen with various zoom levels, and each supports most types of camera-storage media, either natively or via third-party adapters. All can send images to your TV through their video-out ports, and the Coolwalker and the FlashTrax ship with remote controls.

Nikon Coolwalker MSV-01

Nikon's Coolwalker is an extremely compact and stylish piece of equipment that holds 30GB of data. Straight out of the box, the Coolwalker is handy and easy to use. It's small, it has an unambiguous interface with iPod-style click-wheel buttons, and it has an easy-to-understand hierarchical folder-navigation system. And Nikon's inclusion of a convenient histogram was thoughtful.

But the Coolwalker's utility is diminished by what Nikon likely perceived as a strength: it's specifically designed to be used with Nikon digital SLR cameras and certain Coolpix point-and-shoot models. If you're shooting with another brand of camera, the device won't display Raw images (though it does display TIFFs and JPEGs from other cameras), and its audio functions, such as playback of voice notations with photos and MOV or WAV video files, work only with files generated by Nikon cameras.

The unit's LCD, at 2.5 inches, is not large enough, despite the screen's excellent quality. Images are bright and easy to see, and the viewing angle is wide, without color or image distortion as you view the display from either side. However, the colors seem a bit flat.

File transfers are relatively fast: in our tests, it took about 2 minutes and 42 seconds to transfer 256MB of images from a CompactFlash card to the device, and it took 1 minute and 43 seconds to transfer 1GB of images to my computer via the device's USB 2.0 connection. Playback time is a bit sluggish, though; the unit took a few seconds to switch from one full-screen image to another, and to move or remove images. The Coolwalker's battery life is between 1.5 and 2 hours—nothing to write home about.

Menus containing shooting data such as aperture, shutter speed, ISO, white balance, and other EXIF information are easily accessible, but they're superimposed on the image, which makes them difficult to read. To see all the EXIF data, you must cycle through five separate screens.

The Coolwalker has some frustrating quirks. For example, you must use the remote control to rotate a shot, because the unit has no rotate button. Editing is a one-shot-at-a-time operation; there's no way to select a group of images to move or delete, though you can designate multiple images on a single print order.

The device has too many limitations for me to recommend it as an all-around viewer, unless you use a Nikon camera, and even Nikon users might benefit more from one of the other photo viewers I looked at.

Nikon Coolwalker MSV-01 This compact viewer and hard drive is designed to work with Nikon cameras.

Epson P-2000 This device's large, brilliant screen does your pictures justice.

Epson P-2000

For these photographic viewers, display size makes a big difference—and the Epson P-2000's brilliant, 3.8-inch LCD comes closest to replicating your original photographic vision. The P-2000 has a comparatively huge LCD screen, and the device also works as a video and MP3 player. Its screen's colors are bright and have excellent contrast, and you can use its friendly, icon-based navigation system to see full-screen images. The P-2000 is a tad heavier and bulkier than the Coolwalker, but its diverse functions make it more flexible and convenient.

You can rotate, move, or choose multiple images for printing at the same time, and you can choose between a number of professional and slick slide-show transitions. The P-2000 directly supports Raw images from camera manufacturers such as Canon and Nikon, and of course Epson, and it plays movie formats such as AVI and MOV generated from any camera.

The P-2000's battery lasts 2.5 to 3 hours. It took about 1 minute and 42 seconds to transfer images from a full 256MB CompactFlash card to the unit, and 1 minute and 11 seconds to transfer 1GB of images from the unit to a computer.

The device's display maintains a high level of image quality at disparate viewing angles. You can toggle EXIF data on and off; the information appears on a gray background that covers half the selected image—it isn't superimposed directly over the image, as with the Coolwalker. All shooting information is shown on one screen, but there is no histogram.

This unit can play popular audio and video formats, and it does a fine job with both. You can even set music to play with your slide shows.

But the P-2000 has its downsides. You can't include Raw photos in slide shows or enlarge or rotate them, though Epson is

PHOTOGRAPHY BY PETER BELANGER

planning firmware upgrades to improve support in the future. The unit will not display TIFFs, and you can use only certain Epson printers to print your images. When we printed, sometimes the printer cut off part of the image and did not print as the P-2000's or the printer's preview indicated.

SmartDisk FlashTrax

SmartDisk bills the FlashTrax as a multimedia player, but it's primarily targeted at photographers. It comes in three hard-drive sizes—20GB, 40GB, and 80GB. This device has many useful and convenient features: the body is compact, functional, and quite stylish, and you can shut the unit to protect the screen.

The FlashTrax also has a progressive zoom that lets you enlarge specific parts of an image—a nice touch. The EXIF shooting information is superimposed on a white background on top of the image so that you can see and read it clearly. And the FlashTrax is more flexible than the others in its handling of Raw files: it lets you not only view them but also manipulate them.

Unfortunately, the FlashTrax's display is inferior to the displays on the other devices. Its LCD has a low-resolution look, and I saw what seemed to be halftone dots on the screen. Despite a generous 3.5-inch screen size, images are harder to see on this viewer than on the others. The FlashTrax's narrow viewing angle adds to the LCD's problems.

The FlashTrax's performance is slow. It takes between three and four seconds for each image to appear on screen. Whenever it switches thumbnails, the screen goes white while it waits for the next image or screen of thumbnails to load.

The FlashTrax's navigation system has a Windows look to it. You can program it to play slide shows, without music and fancy transitions. I easily hooked it up to a TV to view images. The unit's speaker sound was simply awful, but audio was much better when I used headphones.

SmartDisk FlashTrax This device's screen seems low resolution.

The FlashTrax's battery life is a little less than 2 hours. Moving images from a full 256MB CompactFlash card to the unit took about 2 minutes and 11 seconds. And transferring 1GB of data from the FlashTrax to my Mac took an average of 1 minute and 7 seconds.

How to Choose

If you're a photographer looking for the best way to view your images, the unit with the best and brightest screen is the Epson P-2000. While its case doesn't close like the FlashTrax's, and the unit isn't as compact as the Coolwalker, the P-2000's image quality is far superior to that of the other two.

Battery life is not spectacular for any of these units, but the Epson outperforms the others. It was nice to be able to use USB 2.0 to transfer files from the unit to the computer, but FireWire would be even more accessible to Mac users and would likely be faster.

The FlashTrax is the only device that gives you a choice of hard-drive size (and, consequently, price), which some photographers may appreciate. And if you use a Nikon camera, you might prefer the Nikon Coolwalker for its interoperability with your camera.

Macworld's Buying Advice

The Epson P-2000 is the best choice in this new product category. Its high-quality screen and sound, as well as its friendly navigation scheme, give you the best value for your money. The P-2000 has convenient amenities that the other two devices lack, resulting in an altogether more pleasing and productive experience. □

PHOTO-STORAGE AND -VIEWING DEVICES COMPARED

COMPANY	PRODUCT	RATING	PRICE	CONTACT	DIMENSIONS, WEIGHT[A]	HARD DRIVE	COMPATIBLE IMAGE FORMATS	PROS	CONS
Epson	P-2000 ★	♦♦♦♦½	$500	www.epson.com	5.8 × 3.3 × 1.2, 16.0	40GB capacity	JPEG, Raw format from some Epson, Canon, and Nikon cameras	Big, brilliant screen; supports several Raw formats; supports and plays back several video formats; friendly, icon-based interface; wide viewing angle; EXIF data clearly visible on gray background; good battery life.	Will not enlarge or rotate Raw photos; doesn't include Raw photos in slide shows; no histogram; can print only to certain Epson printers.
Nikon	Coolwalker MSV-01	♦♦♦	$550	www.nikon.com	3.2 × 5.1 × 1.4, 10.6	30GB capacity	TIFF, JPEG, NEF (Nikon's Raw format), with embedded JPEG preview	Compact, ultrastylish body; easy-to-use interface; good-quality screen; handy histogram; speedy file transfer.	Supports WAV, MOV, and Raw images from Nikon cameras only; EXIF data lettering is hard to read; EXIF data spread over five screens; small LCD; short battery life.
SmartDisk	FlashTrax	♦♦♦½	20GB, $350; 40GB, $470; 80GB, $550	www.smartdisk.com	3.6 × 5.6 × 1.3, 12.5	20GB, 40GB, or 80GB capacity	JPEG, GIF, BMP, Raw, TIFF, with embedded JPEG preview	Superior industrial design; case latches shut; high-quality audio through headphones; displays many Raw formats; lets you manipulate Raw images; lets you enlarge specific parts of an image; comes in three hard-drive capacities.	Inferior screen quality; slow performance; arcane navigation system and interface; can't print from device.

★ = Editors' Choice. [A]Dimensions in inches, width × height × depth. Weight in ounces, including battery.

Dual-Layer 16x DVD Burners

Faster External Drives Increase Disc Capacity, at Surprisingly Low Prices

The Winner The LaCie d2 DVD±RW 16× FireWire with Double Layer drive has good performance and a great software bundle.

BY JAMES GALBRAITH

Keeping up with the ever-changing DVD-burner market could be a job in itself. Every few months, faster drives are announced, new features get introduced, and competing (and confusing) disc formats continue to play leapfrog in the quest for market dominance. The most recent technological development in DVD writers is dual-layer burning. This nifty technology allows you to double the capacity of a DVD, from 4.7GB to 8.5GB, by writing to two different layers on the same side of the disc. You've been renting double-layer DVDs for a while, but now home users can burn their own.

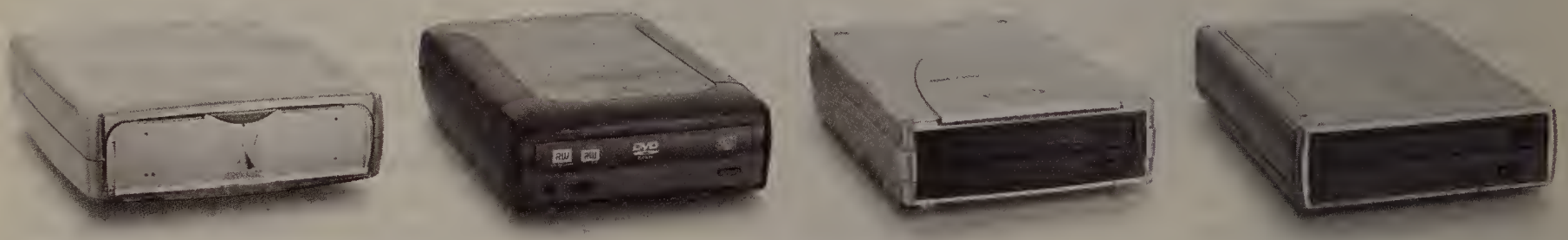
Recently, Macworld Lab put seven of the latest drives to the test. There were more differences between the drives than we had anticipated, and in the end, the LaCie d2 DVD±RW 16× FireWire with Double Layer drive took the crown.

Dual-ing Devices

In the world of DVD burners, there are two competing standards groups that create two types of blank DVDs: DVD+R and DVD-R. They do the same thing, and both are compatible with most home-entertainment DVD players and with the DVD drives in many computers. One group will come out with media and promise faster DVD-write speeds, and the other will soon follow or jump ahead. Though it may be confusing, the upside to this heated rivalry is that it keeps the price of media down and speeds up development of new features. All the drives we looked at can write to both DVD+R and DVD-R media, as well as dual-layer media (also called either DVD+RW DL or DVD+R9).

Faster DVD, Burn, Burn

The speed at which a drive will burn a DVD depends on three factors: the drive mechanism's speed, the speed of its connection to your Mac, and the disc's rated speed. Each of the drives we tested claims to burn a single-layer DVD at up to 16×, and all the drives have FireWire ports, except the Iomega, which has only a USB 2.0 port. Because all



DUAL-LAYER 16x DVD BURNERS COMPARED

COMPANY	PRODUCT	RATING	PRICE	CONTACT	CONNECTORS	WRITE SPEEDS	BUNDLED SOFTWARE	DRIVE MECHANISM
EZQuest	Boa 16× DVD± RW Double Layer FireWire	4	$160	www.ezq.com	FireWire 400 (2)	DVD-R, 16×; DVD+R, 16×; DVD+R dual-layer, 4×; CD-R, 32×	EMC/Dantz Retrospect Express, Roxio Toast 6 Lite	Pioneer DVR-108
Iomega	Super DVD Writer 16×	3	$190	www.iomega.com	USB 2.0 (1)	DVD-R, 8×; DVD+R, 16×; DVD+R dual-layer, 2.4×; CD-R, 48×	Charismac Discribe 5	Lite-On Show-1633S
Kanguru	Quicksilver 16× QS-FW DVDRW FireWire	4	$160	www.kanguru.com	FireWire 400 (2)	DVD-R, 16×; DVD+R, 16×; DVD+R dual-layer, 4×; CD-R, 48×	NewTech Infosystems Dragon Burn 4	NEC ND-3500AG
LaCie	d2 DVD±RW 16× FireWire with Double Layer ★	4	$189	www.lacie.com	FireWire 400 (2)	DVD-R, 16×; DVD+R, 16×; DVD+R dual-layer, 4×; CD-R, 32×	LaCie Disc Recording, Roxio Toast 6 Titanium	NEC ND-3500AG
OWC	Mercury FireWire/ USB2 D108 DVD± RW	3½	$160	www.macsale.com	FireWire 400 (2), USB 2.0 (1)	DVD-R, 16×; DVD+R, 16×; DVD+R dual-layer, 4×; CD-R, 32×	EMC/Dantz Retrospect Express, New Tech Infosystems Dragon Burn 4	Pioneer DVR-108
Plextor	PX-716UF	4	$239	www.plextor.com	FireWire 400 (1), USB 2.0 (1)	DVD-R, 16×; DVD+R, 16×; DVD+R dual-layer, 4×; CD-R, 48×	Roxio Toast 6 Lite	Plextor PX-716UF
Sony	DRX-710UL/T	3½	$230	www.sony.com	FireWire 400 (1), USB 2.0 (1)	DVD-R, 8×; DVD+R, 16×; DVD+R dual-layer, 2.4×; CD-R, 32×	Roxio Toast 6 Lite	Lite-On Show-1633S

★ = Editors' Choice.

We connected each drive to a dual-2.5GHz Power Mac G5 running Mac OS X 10.3.7 and with 512MB of RAM. We recorded the time it took each drive to burn 8GB of data onto dual-layer DVD+R Verbatim media of a 655MB file from a burned dual-layer DVD to the Mac's internal hard drive. The Iomega drive was connected via USB 2.0. The rest were connected via FireWire 400.—MACWORLD LAB TESTING BY JEFFY K. MILSTEAD

current Macs include FireWire, which is as fast as or faster than USB 2.0, we tested all the drives except the Iomega using FireWire. We tested the Iomega using USB 2.0.

The Sony drive was the fastest when burning 4.7GB of data to a 16×-rated DVD+R disc, at just 5 minutes and 56 seconds. The Plextor, Kanguru, and LaCie drives were a tad slower, but three drives—the EZQuest, the OWC, and the Iomega (due to its slower, USB 2.0 connection)—took considerably longer to write the disc.

We also spot-tested USB 2.0 write speeds using the Sony and Plextor drives, which offer both USB 2.0 and FireWire. The Sony took about three and a half minutes longer to burn 4.7GB to the same media using USB 2.0. The Plextor took nearly two minutes longer.

The fastest dual-layer media available at press time are rated at only 2.4×, but the drives rated at 4× for dual-layer burning can actually burn these 2.4× discs at 4× speeds, taking about 27 minutes to burn an 8.5GB disc. The Sony and Iomega drives are the exceptions: they are rated at 2.4× for dual-layer burning and took almost 44 minutes to burn a disc. So if you plan to use the dual-layer feature often, you'll definitely want to buy a burner rated at 4× for dual-layer burning.

We also tried copying data from the external drive to our Mac to test the drives' read speeds. When we copied 655MB of data that had been burned to a dual-layer disc, the Plextor was quite a bit faster than the rest, finishing the task in just 1 minute and 15 seconds, probably owing to its 8MB of cache memory (all the other drives have 2MB).

You're Nowhere without Software

At present, OS X doesn't recognize any of the drives included in this review, but each drive comes with software that lets you use it with OS X. You just can't use Apple's Disk Burner software, iTunes, or iPhoto to burn discs. iDVD is another story altogether; you can burn a DVD directly from iDVD only if you have an internal Apple SuperDrive. The recently released iDVD 5 (♦♦♦♦; page 60), included in the iLife '05 suite, will let you create a disc image that you can then burn to an external Apple-supported DVD drive, or you can use a disc-burning utility, such as Roxio's Toast. Apple's DVD Studio Pro won't burn directly to any of these drives until Apple supports them.

It sounds like a mess, right? Don't despair—there are two other ways around this lack of support. First, LaCie includes with its drive a utility called Disc Recording, which lets you use Disc Burner, iMovie, iTunes, and DVD Studio Pro to burn to the drive. The utility is available only when you purchase a LaCie drive. Second, owners of other drive brands can download a free utility called PatchBurn (www.patchburn.de), which does the same thing as LaCie's utility. We tried PatchBurn on all the drives and had success using Apple's Disc Burner software and iTunes. PatchBurn also offers a hack that lets you burn to a drive using iDVD 4, but use it at your own risk. (We encountered a few crashes while trying to use it.)

All the burners include third-party applications for burning audio, video, and other files onto CDs and DVDs. Roxio's Toast is *Macworld*'s disc-burning software of choice, and we performed all our tests using Roxio's Toast 6 Titanium (♦♦♦♦½; December 2003). Three of the drives—the EZQuest, the Plextor, and the Sony—ship with a Lite version of Toast, which has fewer features than the full version. The LaCie drive ships with the full version of Toast, which makes this drive even better in our eyes. The other drives ship with either NewTech Infosystems' Dragon Burn 4 or Charismac's Discribe 5. In our tests, Dragon Burn worked fine and had an intuitive user interface, but we found Discribe difficult to use. The EZQuest and OWC drives also include EMC/Dantz's Retrospect Express, which allows you to automate backups of your data.

Macworld's Buying Advice

These fast new burners can be real time-savers, and the new dual-layer features can help you get much more data onto one disc, so you're not spanning projects across, or backing up to, two different discs.

We judged the LaCie d2 DVD±RW 16× FireWire with Double Layer drive to be the best value, because it offers the full version of Roxio's Toast and software that makes it compatible with OS X. The Plextor drive, with its 8MB of cache memory, was the best all-around performer, and it has great connection options, but it's also the most expensive. If you already own Toast Titanium, you might consider the Kanguru Quicksilver drive, which is based on the same mechanism as the LaCie but costs about $30 less. □

Runners-up EZQuest's Boa 16× DVD±RW Double Layer FireWire, Iomega's Super DVD Writer 16×, Kanguru's Quicksilver 16× QS-FW DVDRW FireWire, OWC's Mercury FireWire/USB2 D108 DVD±RW, Plextor's PX-716UF, and Sony's DRX-710UL/T (from left to right).

PHOTOGRAPHS BY PETER BELANGER

Macworld

	4.7GB DVD+R BURN	8GB DUAL-LAYER DVD BURN	COPY 655MB TO HARD DRIVE	PROS	CONS
	9:14	27:02	2:03	Inexpensive; burns 2.4×-rated dual-layer media at 4×.	Noisy fan; burns 16× media at 8×.
	10:05	43:45	2:40	Flexible cross-platform compatibility due to USB 2.0.	Slow 16× and dual-layer burn speeds.
	7:54	26:52	3:20	Inexpensive; burns 2.4×-rated dual-layer media at 4×.	Slow read speeds.
	6:44	**26:51**	3:20	Includes full version of Toast; burns 2.4×-rated dual-layer media at 4×; Disc Recording software lets the drive work with Apple's i-apps (except iDVD).	Slow read speeds.
	9:16	27:04	2:02	Inexpensive; flexible connectivity options; includes 25 CD-R discs and five 8× DVD-R discs; burns 2.4×-rated dual-layer media at 4×.	Burns 16× media at 8× speeds.
	6:17	27:08	**1:15**	Flexible connectivity options; burns 2.4×-rated dual-layer media at 4×; fast 16× burn speeds; fastest read speeds.	Expensive.
	5:56	43:55	2:41	Flexible connectivity options; fastest 16× burn speed.	Expensive; slowest dual-layer burn speed.
	<Better	<Better	<Better		

BEST RESULTS IN **BOLD**. Scores are in minutes:seconds.

using Toast Titanium 6.0.7, and also the time it took to burn 4.4GB of data onto 16× DVD+R Verbatim media. We then timed the copy

DayLite 1.7

Sales-Management Software Covers All the Bases

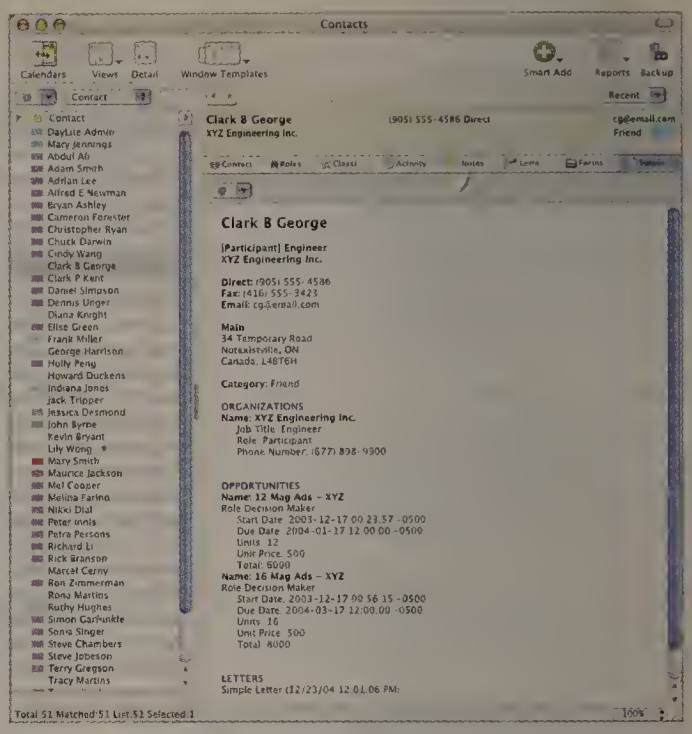
BY JEFFERY BATTERSBY

When it comes to contact management, most people can muddle through with OS X's Address Book or Microsoft Entourage. But salespeople typically need something stronger—something that allows them to gather detailed information on prospective and existing customers, track projects, create reports on the status of sales in progress, and forecast future sales. Marketcircle's DayLite 1.7 provides these features and more, giving you complete control over all your sales information. It even lets you merge data with applications such as Microsoft Word and Excel and The Omni Group's OmniGraffle. This powerful CRM (customer-relationship–management) program can be somewhat difficult to learn; however, it's so valuable that you won't regret spending the time to do so.

Get a Grip on Your Customer Base

Moving data from your current contact database to DayLite is easy. The program imports information from a variety of address-book programs and personal information managers, including Windows-based applications such as Best Software's ACT and FrontRange Solutions' GoldMine. The program is also intelligent enough to group your contacts logically. So if you have several contacts from the same company in your address book, DayLite will link them by company without any effort on your part.

Like any standard calendar application, DayLite lets you schedule appointments, tasks, and reminders. But the program gives you far greater flexibility than simple scheduling. For example, if you have a sales lead in your database, you can send him or her a letter or an e-mail directly from DayLite. As the lead becomes a customer, you can create projects, schedule events and tasks, and create notes, which DayLite links directly to your customer and his or her company. As you perform each of these tasks, DayLite maintains a detailed history of your correspondence (including the actual letters), project statuses, and potential closing dates, so salespeople and their managers can get a detailed view of the progress or history of any sales event (see "DayLite Delights").



DayLite Delights Marketcircle's DayLite provides powerful contact-management features and maintains detailed histories of your interactions with customers.

Unfortunately, DayLite doesn't notify you of pending events if the application is closed. You can remedy this by exporting calendar events to iCal, but this workaround is unwieldy for a program that is otherwise quite comprehensive.

Although DayLite is great for individual salespeople, the program is also designed for use in multiuser environments: one database can be shared by an entire sales and support staff. You can also sync your contact and scheduling data with any Palm OS–based device, or even your iPod, using iSync.

DayLite's only major weakness is complexity. It's easy enough to get your contact information into the program and begin setting up appointments. But to make the most of DayLite, you need to thoroughly understand the program's reporting and project-management features. Fortunately, Marketcircle's Web site contains dozens of video tutorials that guide you—from the basics of creating new contacts and scheduling tasks all the way through administering the program in multiuser environments. Free technical support is limited to 30 days after purchase or to three incidents, after which you'll need to buy a support contract from Marketcircle.

Macworld's Buying Advice

We highly recommend DayLite 1.7 for Mac-based salespeople. It's an excellent application for managing leads, scheduling appointments and projects, keeping track of current customers, and gaining insight into future sales.

RATING: ⬧⬧⬧⬧½

PROS: Extensive tools; excellent reporting features; detailed customer-history information; free online training videos.

CONS: Advanced features are difficult to learn; no notification of pending events if application is closed.

PRICE: single-user license, $149; bulk discounts available

COMPANY: Marketcircle, www.marketcircle.com

www.InsideMacRadio.com

Sorenson Squeeze 4 Compression Suite

Video Utility Improves Workflow and Output Quality

BY JIM HEID

For many video producers, the last step in a production project is using a compression utility, which takes full-resolution video and prepares it for Web, CD-ROM, or DVD delivery. Sorenson Squeeze 4 Compression Suite can grind video into nearly every popular rich-media format, including QuickTime, RealMedia, Macromedia Flash, MPEG-2, and MPEG-4.

Missing from that laundry list is Microsoft's hugely popular Windows Media format. Sorenson Media plans to support Windows Media encoding by the time you read this. Alas, the plug-in for this support will cost an additional $179.

Squeezing Made Simple

The big changes in Squeeze 4 are its revamped interface and enhanced optimizing features. Indeed, Squeeze 4 can hold its own alongside Discreet's Cleaner (♦♦♦♦; June 2003), long the king of compression.

Advanced users will delight in numerous new image filters and settings, and beginners can get great results from Squeeze's built-in presets (see "Crunch Time"). More than 100 presets cover delivery methods ranging from dial-up modems to broadband connections to CDs and DVDs.

On the downside, the presets have arcane names, such as Med_Prog, that only hint at a setting's parameters and make it harder for inexperienced users to choose one setting over another. I'd like to see Squeeze display a brief summary of a selected setting in the Details area of its window.

Squeeze 4's interface has other rough edges—its dialog boxes look like those of Windows programs, and some of its keyboard shortcuts behave inconsistently—but I can't gripe about the new preview area, which makes experimenting easy and efficient. A new split-screen feature lets you see before-and-after previews that show how a frame will look after compression. To assess how a specific section of footage will compress, you can mark its starting and ending points and then compress only that section. This is a huge time-saver that streamlines the trial-and-error phase of compression.

Looking Forward

Squeeze 4 adds the ability to create MPEG-1 or MPEG-2 files for use on Video CDs or DVDs. But don't buy it for this reason alone: in my tests, Squeeze's MPEG quality was inferior to that of Apple's Compressor, which is included with both Final Cut Pro HD and DVD Studio Pro 3.0 (♦♦♦♦; September 2004).

Squeeze 4 can also compress to the H.264 format, a brand-new variant of MPEG-4. Also called AVC, H.264 is so new that you can't play it back—QuickTime doesn't yet support the format; however, Apple has announced that OS X 10.4 (Tiger) and QuickTime 7 will.

Squeeze's RealMedia support is a welcome addition, but an annoying bug requires that you save compressed movies on your internal hard drive. There are several glitches like this in Squeeze 4, and Sorenson Media plans to address them with a free version 4.1 update, which should be available by the time you read this.

Crunch Time Drag a full-resolution movie into Squeeze 4, choose one or more of the program's compression presets, and click on the Squeeze It button.

Macworld's Buying Advice

Sorenson Squeeze 4 Compression Suite excels at compressing video to common Web and CD-ROM formats. If your needs revolve around the Flash or MPEG-4 formats, consider Squeeze 4 for Macromedia Flash MX ($119) or Squeeze 4 for MPEG-4 ($199). Both share the Compression Suite's interface and optimizing features.

RATING: ♦♦♦½

PROS: Excellent compression quality; professional-level workflow and automation features; straightforward interface.

CONS: No Windows Media support; some bugs and interface flaws.

PRICE: $499

COMPANY: Sorenson Media, www.sorenson.com

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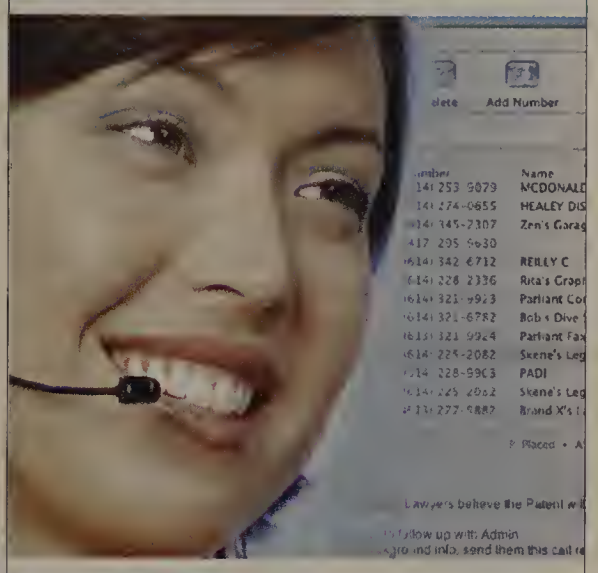

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www.parliant.com

Monitor Color Calibrators

Hardware-Software Combos Give You Consistent Color

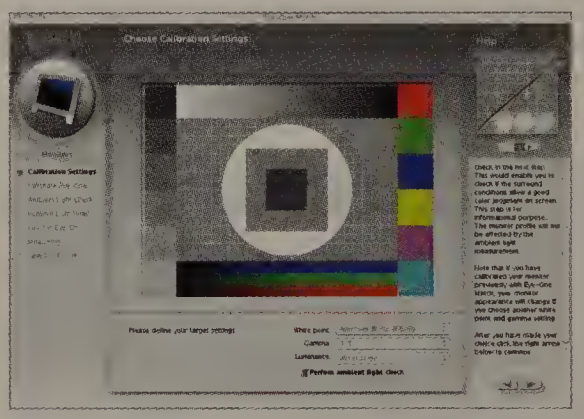
BY JEFF DORGAY

Calibrating your monitor is the first step in achieving accurate color on your Mac, so the colors you see on your screen are as close as possible to those captured by your scanner or digital camera. A monitor-calibration system—composed of a hardware colorimeter and its accompanying software—takes you beyond the accuracy readings of the built-in Apple ColorSync Utility, which provides strictly eyeball measurements. While there are some software-only calibration packages, this review includes only hardware-software combinations.

Such a calibration package precisely measures the way a monitor's color behaves, optimizes that behavior by tweaking the lookup tables (LUTs) in the video card to produce smooth gradations and neutral grays, and then writes a profile that describes the optimized behavior. Color-management systems then use that profile to display color accurately on your screen.

Using several different computers, I tested three popular color-calibration systems: ColorVision's $299 Spyder2Pro Studio hardware-software package; GretagMacbeth's $249 Eye-One Display 2 with Eye-One Match software; and X-Rite's $379 Monaco OptixXR Pro hardware-software package.

These measuring devices plug into your Mac's USB port and either rest on your LCD screen or attach to your CRT with little suction cups. Do not press the calibrator tightly against an LCD panel, because this will change its color and may damage the monitor.



Advanced Calibration The Eye-One Display 2 system's left column walks you through the calibration operation, while a box on the upper right shows how you are manipulating the monitor's gamma curves.

The test machines included a 667MHz PowerBook G4, a 1.8GHz 20-inch iMac G5, and a 1.6GHz Power Mac G5 with an 18-inch Sony XDM-82 LCD and a 19-inch LaCie Electron Blue CRT; all were running OS X 10.3.7. I even tried them on the no-name LCD panel connected to my Windows workstation for a worst-case scenario. A few adjustments made even *that* monitor palatable.

I created a reference print with an Epson Stylus 4000 printer on matte paper. I used the monitor calibrators with their respective software in both basic and advanced modes to see which one produced the closest on-screen match to the reference print.

Basic and Advanced

The basic mode requires no technical knowledge, and you don't need to adjust your monitor—just click on the Calibrate button, and you get a profile in five minutes. The basic method doesn't take into account room lighting or other monitor adjustments. I ran all the calibrators in basic mode first, and while all the results were somewhat off, the GretagMacbeth Eye-One Display 2 unit came closest to the reference print. I tested again in advanced mode and got very different results.

When you run the calibration software in basic mode, the profile you achieve won't offer the ultimate in color accuracy, but it will

be what the industry refers to as *pleasing* color. Typically, this color will be on the warm side, with a bit more contrast and saturation than you'll see in a perfectly color-corrected image. This is fine for most advanced hobbyists.

The advanced mode lets you choose the gamma (contrast ratio), white point, and brightness settings you want your monitor to display, so you can adjust your monitor for flesh tones and gray-scale images. If you have the manual settings on your monitor, for example, the software tells you how to set them so that you have an accurate white point from which to start. It also lets you adjust the fine details in shadows and highlights to be as neutral as possible, but this requires advanced color-adjustment skills. I performed my tests at a 6,500-Kelvin white point. I looked for neutral flesh tones (neither overly red and warm nor blue and cold), clean highlights, shadows free of color tint, and gray-scale images that were neutral gray, without colors.

How much you can fine-tune your monitor's color will determine the ultimate accuracy of your ICC profiles, but even if you have a PowerBook with only a brightness adjustment, proper use of a calibrator will give you more-accurate screen colors than you have now. From start to finish, it will take anywhere from 5 to 30 minutes to calibrate your monitor with any of the tools I tested. If you have more than one Mac, using the calibrator will help you keep color consistent across machines.

Spyder2Pro Studio

I was able to get the closest match to my test print using the Spyder2Pro in advanced mode. Setup is very easy; a wizard interface walks you through all the choices. The Spyder2Pro is also the slowest of the three, taking almost 20 minutes to create a profile.

As a bonus (in addition to its reasonable price), the Spyder2Pro comes with a copy of nik multimedia's Color Efex Pro LE, ColorVision's DoctorPro, and Pantone's

continues

PHOTOGRAPHY BY PETER BELANGER

COLOR CALIBRATORS COMPARED

COMPANY	PRODUCT	RATING	PRICE	CONTACT	PROS	CONS
ColorVision	Spyder2Pro Studio ★	●●●●½	$299	www.colorvision.com	Easy to use; best out-of-the-box profiles in advanced mode; reasonably priced; great extra software bundled.	Slow.
Gretag-Macbeth	Eye-One Display 2	●●●½	$249	www.i1color.com	Easy to use; best basic profiles; reasonably priced; pro upgrade with trade-in; great tutorials.	Not as accurate as the others in advanced mode.
X-Rite	Monaco OptixXR Pro	●●●●	$379	www.xritephoto.com	Fairly good color accuracy out of the box; easy to profile multiple monitors.	Needs expert tweaking to get best profiles; expensive.

★ = Editors' Choice.

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Colorist. DoctorPro helps you profile your printer to match your newly profiled monitor, and Colorist adds all the Pantone color checkers to Photoshop's checker.

The Spyder2Pro is the easiest to use and the best choice for advanced hobbyists.

Monaco OptixXR Pro

X-Rite's Monaco OptixXR Pro system was a close second for out-of-the-box color accuracy, and it offered a wide range of adjustments to the finished profiles. Spending a bit of time with the adjustment curves yielded some great profiles, but the test image was a bit warm on screen compared with the reference print.

My favorite feature of the Monaco OptixXR Pro is its ability to match profiles from different monitors. After you import color profiles from your other systems, you click on the Match Profiles button and resave the new profiles to their respective monitors. The results were very good, and this saved me a lot of time across four systems.

Eye-One Display 2

The $249 Eye-One Display 2 had the most user-friendly software and setup. With the help of great PDF and wizard tutorials, it produced the most accurate profile of the four in basic mode, but in advanced mode its profile was somewhat cold and washed out.

The Eye-One site offers a free utility, Eye-One Share, that lets you share profiles among multiple monitors and download the Pantone charts to your Mac.

If you get bitten by the color-management bug, GretagMacbeth will give you a $200 trade-in allowance on its $1,395 Eye-One Photo spectrophotometer, which will help you profile your scanner, printer, and projector (with the optional $995 Eye-One Beamer attachment). I use this system in my studio with excellent results.

Which Is Best?

My favorite device was ColorVision's Spyder2Pro; of the three systems I tested, it allowed me to achieve the most accurate, neutral color. The Monaco OptixXR Pro was also quite accurate and offered the ability to tweak profiles, but that requires a high degree of color-management skill. The Eye-One Display 2 had the least-accurate profiles in advanced mode, but it was a snap to use and produced great profiles in basic mode.

If you're just getting started in color management, you should be aware that calibrating your monitor, while essential, is just one part of your color-management system. You may find that you also need to profile other devices, such as printers and scanners. Most pros use separate dedicated packages for monitor and output profiling, rather than relying on one system that tries to do it all. And all of these companies sell add-on software and hardware, or bundled suites of both, that take into account your printers and scanners.

Macworld's Buying Advice

While the Eye-One Display 2 package is a great beginning calibrator, I recommend the ColorVision Spyder2Pro Studio for its excellent out-of-the-box color. Color pros can wrestle more performance out of X-Rite's Monaco OptixXR Pro, but the Spyder2Pro offers the best performance and value. □

PHOTOGRAPHY BY PETER BELANGER

THE CONQUEST

DiskWarrior is Now OS X Native

It's the indispensable utility that repairs problems such as disks that won't mount, files you can't trash, and folders that have disappeared. MacUser magazine said, "It's the fastest and safest data recovery utility you can buy."

Macworld magazine said, "DiskWarrior is by far the best disk utility available for the Mac; it can repair virtually any disk problem you may encounter...and it is likely to become the only tool you'll want to keep with you at all times."

David Coursey, ZDNet AnchorDesk, agrees in an article comparing disk utilities. He used it to fix a disk that no other utility could. "DiskWarrior is a great product, not just because it fixed a pretty serious screw-up, but because it showed me what it planned to do in minute detail before doing it."

But disk damage isn't the only threat to your data. As hard drives get older, the drive mechanisms

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Delicious Library 1.0

Easy and Fun Library Software Catalogs Your Media

BY MATHEW HONAN

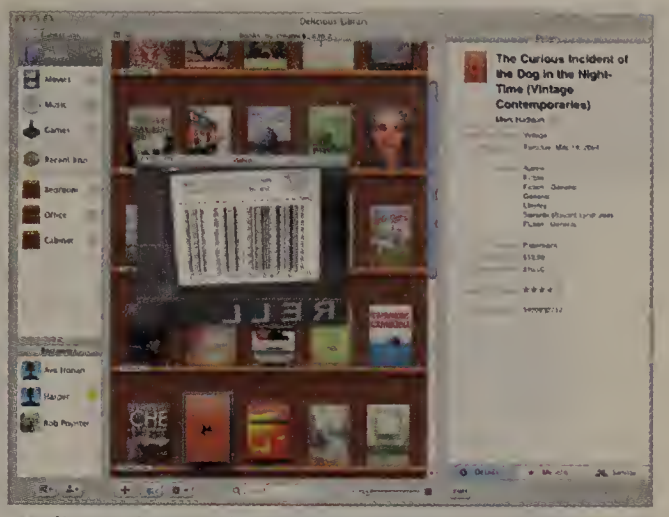
Like many people who have large libraries of books, videotapes, and music, I have trouble keeping track of everything, because it's tedious and time-consuming to enter several hundred items into a spreadsheet. But now, thanks to Delicious Monster's Delicious Library 1.0.6, I have an easy way to catalog all my books, music, movies, and video games.

Delicious Library uses a product's UPC symbol (or bar code) to query Amazon.com's database, and then it records the product information. Unlike boring spreadsheets, Delicious Library reproduces a product's cover art to display details about your media in rows of virtual bookshelves. And its integration with Apple's iCal and Address Book helps you keep track of what you have, to whom you've lent it, and when you expect it back.

Although Delicious Library is compatible with a standard bar-code scanner, its most ingenious feature is innovative real-time bar-code–recognition software that turns an ordinary iSight camera into a bar-code–devouring fiend. Once I got the hang of scanning—which took less than five minutes—I began scanning just about everything in my home that even vaguely resembled a UPC symbol (see "Media Tracking").

I had no trouble scanning any of my DVDs or games, but I did have to enter several older books and hardback books with missing jackets by hand. Creating manual entries by entering title and author information is a snap, and Delicious Library was able to find all but my most esoteric titles in Amazon.com's database. From my music collection, I successfully scanned in 267 CDs and had to manually enter the remaining 44—nearly all of which were released by independent labels.

My only complaints are Delicious Library's lack of iTunes integration and its inability to query databases other than Amazon.com's (so that it could recognize more unusual types of media, such as international books and albums). Delicious Monster says its next version will likely support the Internet Movie Database (www.imdb.com) and the allmusic database (www.allmusic.com).



Media Tracking Delicious Library lets you use your iSight camera to scan bar codes.

Macworld's Buying Advice

Delicious Library 1.0.6 is an excellent Mac application. In addition to being useful and easy to use, it's just plain fun. I highly recommend it for anyone with a large media collection. If only it had iTunes integration and could query databases that recognized international imports, it would be perfect. □

RATING: ♦♦♦♦½
PROS: Excellent cataloging capabilities; visual representation of media; bar-code recognition via the iSight; iCal and Address Book integration.
CONS: No iTunes integration; queries only Amazon.com's database.
PRICE: $40
COMPANY: Delicious Monster, www.delicious-monster.com

CONTINUES

begin to malfunction. Eventually, the malfunctions become so severe that the drive simply stops working. DiskWarrior can automatically test for hardware malfunctions, giving you the chance to back up your data before it's too late.

Be prepared. Don't wait until after you have a disk disaster to buy your copy of DiskWarrior. Bob LeVitus, aka Dr. Mac, said, "I feel naked without DiskWarrior." You can believe MacHome magazine when they said, "DiskWarrior is a quick, one-click solution to faster, more stable hard drives."

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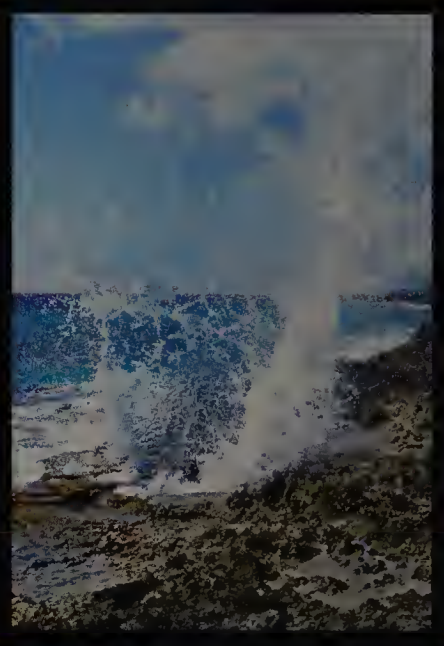
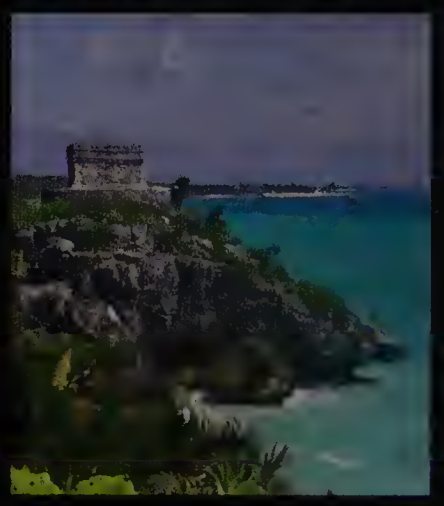




Panorama V

Respected Database Program Comes to OS X

BY WILLIAM PORTER

There's good news for devotees of ProVue's Panorama: Panorama V (or version 5) runs in OS X. And this version adds a boatload of enhancements—including live clairvoyance (similar to the easy search feature in OS X's Finder), more ways to get information from the Internet, extensions to Panorama's programming language, custom functions, and a great new way to create custom menus—to the great features Panorama has had for years, such as cross-tab reports, charts, and quick subtotaling of groups.

Is Panorama V Right for You?

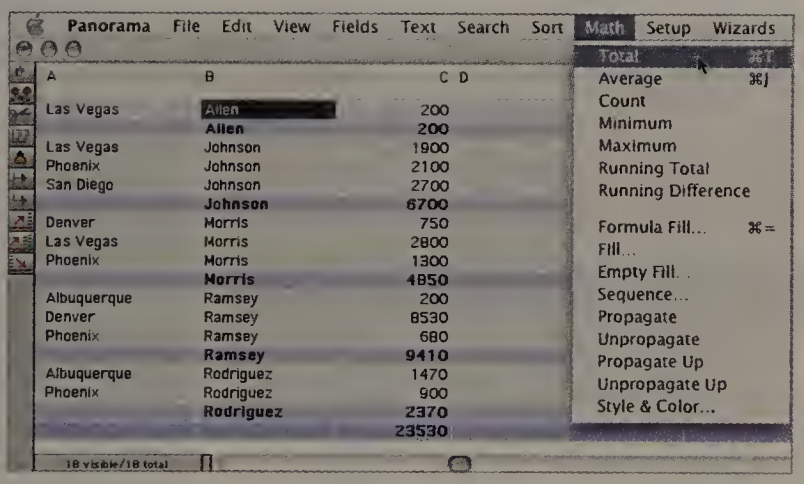
If you're developing even moderately complex databases, or if you need to share your databases with many users over a network, Panorama can't compete with FileMaker Pro 7 (♦♦♦♦♦; October 2004), 4D 2004, Servoy, or other excellent client-server relational database systems. Panorama V is currently only for single users. (ProVue says that it's working on a server version, but no release date has been announced.) Panorama does have tools for linking files using lookups, but defining these links is not as easy as defining relationships in FileMaker Pro or 4D, and Panorama provides no way to keep track of relationships after they've been defined. Panorama's programming language is not as powerful as 4D's (you can't compile a Panorama database), not as well documented as Servoy's (which uses standard JavaScript), and not as easy to learn as FileMaker Pro's.

If your needs are simple, Panorama may not be as good a choice as FileMaker Pro or even Excel (♦♦♦♦; August 2004). After all, Excel can also do cross-tab reports, charts, and quick summaries. Panorama V's documentation is extensive (three full volumes!), but at times it seems to be a labyrinth of cross-references.

However, Panorama can take you way beyond Excel's database features. You can link files, build attractive forms and reports, and exchange data with Web sites such as FedEx's online tracking system. I especially liked Panorama's new elastic-forms feature, which lets you create fields that get wider or narrower as a user resizes the window. With Panorama's programming language, you can manipulate your data in almost any way you can imagine. And ProVue provides free online tech support.

Quirky Interface

Panorama V can't directly import an Excel spreadsheet, and most of its import and export options are hidden in a wizard rather than readily accessible in the File menu. And its user interface is peculiar. For example, there are three different commands in three different places for deleting records. To delete one record, you use a button in the toolbar; to delete all the records in a database, you use a command in the Edit menu; and to delete the records currently displayed, you first use the Select Reverse command, which *hides* the records you want to delete and displays the ones you want to keep, and then use the Remove Unselected command to delete the records that are not displayed.



Unintuitive Interface This datasheet was organized with the Group command, which is in the Sort menu, and the Total command, which is in the Math menu. But why is the Style & Color command in the Math menu?

Macworld's Buying Advice

If you've used and liked previous versions of Panorama, you'll want to upgrade to this version. Otherwise, Panorama V is best suited to people who work mainly with flat-file or only moderately complicated relational databases, who want ready-made data analysis tools, and who occasionally need a powerful programming language. □

RATING: ♦♦♦½

PROS: Excellent data-analysis tools including charts, cross-tab reports, and summaries; helpful wizards; powerful programming language; free online tech support.

CONS: No multiuser support; weak support for relational database structures; limited import and export options; idiosyncratic user interface.

PRICE: $299; upgrade, $140

COMPANY: ProVue, www.provue.com

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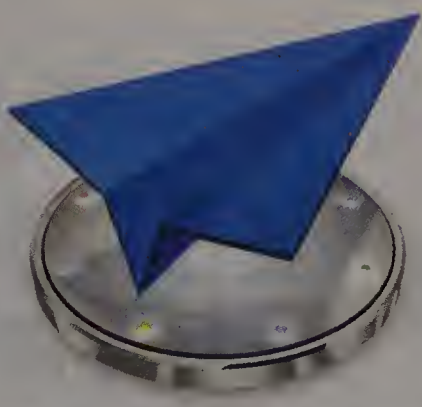

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Top Products

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MINIDV CAMCORDERS

★★★★½ **Optura 40** ($999), from Canon (www.canon.com):
The Optura 40 produces excellent video and respectable still photos, has professional features such as a true 16:9 mode, smooths the effects of a shaky grip, and is easy to use (November 2004; find.macworld.com/0130).

★★★★ **DCR-PC109** ($899), from Sony (www.sony.com):
Although it requires a docking station, this camcorder has excellent image stabilization. It also includes a spot-focus capability, headphone and mike jacks, and a hot-shoe (November 2004; find.macworld.com/0130).

DIGITAL CAMERAS

4-MEGAPIXEL DIGITAL CAMERA

★★★★ **PhotoPC L-410** ($200), from Epson (www.epson.com):
This bargain 4-megapixel camera produces sharp, clear photos with very good color. It also has a continuous shooting mode. However, it's bulky, has a small LCD, and has nonrechargeable batteries (find.macworld.com/0249).

ALSO RECOMMENDED:

Company	Product	Mouse Rating	Price	Contact	Mega-pixels	Go to find.macworld.com/	Originally Reviewed
Epson	L-500V	★★★½	$350	www.epson.com	5.0	0282	online only
Canon	PowerShot G6	★★★★½	$699	www.canon.com	7.1	0206	January 2005
Sony	Cyber-shot DSC-P150	★★★★	$499	www.sonystyle.com	7.2	0206	January 2005
Olympus	C-8080 Wide Zoom	★★★★	$999	www.olympus.com	8.0	0091	September 2004

MACS

DESKTOP

Product	Processor	Display	Rating	Go to find.macworld.com/	Best Price[A]	Speedmark Score[B]
iMac	G5/1.6GHz	17 inches	★★★★	0172	$1,215	150
	G5/1.8GHz	17 inches	★★★★	0173	$1,403	162
	G5/1.8GHz	20 inches	★★★★½	0174	$1,776	163
eMac	G4/1.25GHz (Combo drive)	17 inches	★★★★½	0167	$764	129
	G4/1.25GHz (SuperDrive)	17 inches	★★★★½	0168	$934	129
Mac mini	G4/1.25GHz	not included	★★★★	0316	$494	117
	G4/1.42GHz	not included	★★★★	0321	$594	123
Power Mac	G5/1.8GHz	not included	★★★	0177	$1,321	165
	G5/dual-1.8GHz	not included	★★★★	0158	$1,762	194
	G5/dual-2GHz	not included	★★★½	0157	$2,203	212
	G5/dual-2.5GHz	not included	★★★★½	0156	$2,644	237

PORTABLE

iBook	G4/1.2GHz	12 inches	★★★★½	0178	$934	106
	G4/1.33GHz (Combo drive)	14 inches	not rated	0179	$1,215	116
	G4/1.33GHz (SuperDrive)	14 inches	★★★★	0180	$1,403	116
PowerBook	G4/1.33GHz	12 inches	★★★★½	0162	$1,280	123
	G4/1.33GHz	15 inches	★★★★	0161	$1,643	121
	G4/1.5GHz	15 inches	★★★★	0160	$2,010	136
	G4/1.5GHz	17 inches	★★★★	0159	$2,177	134

[A] From a PriceGrabber survey of retailers as of 2/15/05. [B] Speedmark 3.3 is Macworld Lab's standard test tool for benchmarking systems running Mac OS X 10.3 (Panther). For information on Speedmark testing, go to www.macworld.com/speedmark.

COLOR INK-JET PRINTERS

★★★★½ **Stylus Photo R800** ($399), from Epson (www.epson.com):
This fast, quiet printer produces beautiful pages and prints on recordable CDs and DVDs (January 2005; find.macworld.com/0246).

ALSO RECOMMENDED

★★★★ **Pixma iP8500** ($350), from Canon (www.canon.com); February 2005; find.macworld.com/0275

COLOR LASER PRINTERS

★★★★ **LaserJet 2550Ln** ($600), from Hewlett-Packard (www.hp.com):
This inexpensive, networkable color laser printer offers crisp text and very good color fidelity, and it supports Apple's Rendezvous. But with a paper capacity of only 125 sheets, you might consider paying the extra $100 for the optional 150-sheet paper tray (find.macworld.com/0083).

FIREWIRE HARD DRIVES

Company	Product	Mouse Rating	Price	Contact	Capacity	Comments
PORTABLE HARD DRIVE						
LaCie	Mobile Hard Drive by F.A. Porsche	♦♦♦♦	$319	www.lacie.com	100GB	It's not the speediest portable drive, but this drive has a low cost per gigabyte.
DESKTOP HARD DRIVE						
OWC	Mercury Elite 800 Pro	♦♦♦♦½	$450	www.macsales.com	400GB	This high-performance drive is for people more concerned with speed and performance than with design details.

Go to find.macworld.com/0314 for more hard-drive reviews and specs.

DISPLAYS

23-INCH DISPLAY

♦♦♦♦½ **L2335** ($1,599), from Hewlett-Packard (www.hp.com); March 2005; find.macworld.com/0278

19-INCH DISPLAY

♦♦♦♦½ **MultiSync LCD1960NXi** ($729), from NEC (www.necmitsubishi.com); October 2004; find.macworld.com/0081

17-INCH DISPLAY

♦♦♦♦ **SyncMaster 172X** ($539), from Samsung (www.samsung.com); October 2004; find.macworld.com/0081

FLATBED SCANNERS

MIDRANGE SCANNER

♦♦♦♦½ **CanoScan 9950F** ($400), from Canon (www.canon.com):

This CanoScan raises the bar for midrange scanners by offering a high optical resolution, improved scan quality, and more-intuitive software controls (find.macworld.com/0188).

LOW-END SCANNER

♦♦♦♦ **CanoScan 8400F** ($150), from Canon (www.canon.com):

The 8400F has limited film and transparency support but is a great all-around scanner with some high-end features and a low-end price (find.macworld.com/0187).

NEW: DUAL-LAYER DVD BURNER

♦♦♦♦ **d2 DVD±RW 16× FireWire, with Double Layer** ($199), from LaCie (www.lacie.com)

Of the drives we tested, this DVD burner offers very good performance (albeit with a slow read speed), the best OS X and iLife compatibility, and a full version of Roxio's Toast Titanium (page 28).

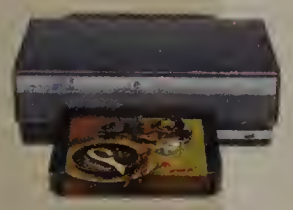
Top Products are those we've recently reviewed in a comparison of like products. As new products become available, we will update the list. For longer reviews of these products and for other product recommendations, go to www.macworld.com/reviews.

IN THE MACWORLD LAB

Hardware Products We Tested This Month

COLOR INK-JET PRINTER

♦♦♦♦ **Deskjet 6840** ($200), from Hewlett-Packard (www.hp.com):



The Deskjet 6840 is a super general-purpose ink-jet printer. It prints great-looking text and photos and has lots of high-end printing and connection options (find.macworld.com/0279).

COLOR INK-JET PRINTER

♦♦♦♦ **Photosmart 8450** ($250), from Hewlett-Packard (www.hp.com):

This network-capable color ink-jet printer uses as many as eight inks to print excellent photos with or without your Mac's help (find.macworld.com/0280).

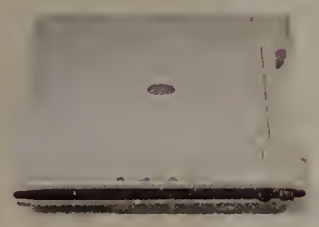
COLOR INK-JET PRINTER

♦♦♦♦ **Stylus Photo R320** ($199), from Epson (www.epson.com):

The Epson R320 is a great six-ink photo printer with some nice features, such as CD printing, a preview display, and computerless printing options. However, its text prints were a little less sharp and slower to print than some other recently reviewed photo ink-jets (find.macworld.com/0318).

FLATBED SCANNER

♦♦♦½ **CanoScan LiDE 500F** ($130), from Canon (www.canon.com):



This superthin scanner has lots of great features, such as a flexible lid and a transparency adapter. However, the larger, but only slightly more expensive, CanoScan 8400F (see listing at left) is easier to recommend than this scanner (find.macworld.com/0281).

DIGITAL CAMERA

♦♦♦ **PowerShot SD300** ($400), from Canon (www.canon.com):

This is a solid pocket camera, but it's pricey, and its images suffer from noise and fringing. If you don't mind a bulkier, more automatic camera, the 4-megapixel Epson PhotoPC L-410 (see page 38) is a bargain at half the price (find.macworld.com/0283).

- Chessmaster 9000
- Postal 2: Share the Pain
- Close Combat: First to Fight
- Parasol Wallop
- Apeiron X

The Game Room

With the free Chess game already included as part of OS X, you may wonder why you'd need another way to play chess on the Mac—or why you'd lay down hard-earned cash to get it. But Feral Interactive's Chessmaster 9000 isn't just a chess game. It's the ultimate chess resource.

Chessmaster 9000 lets you choose from more than 60 different 3-D boards. New players are assigned a basic skill rating, and as you play games, the software adjusts your rating to reflect your skill level. Chessmaster 9000 then uses this rating to select the computer-controlled opponents that are most appropriate for you—opponents range from newbies to grand masters. If you run into trouble during a game, you can get on-the-fly advice from the Chessmaster.

Historic Moves Chessmaster 9000 lets you relive a classic game played by 19th century masters.

Unless you play chess regularly, you'll probably want to brush up on your strategy. And to that end, Chessmaster 9000 includes the Classroom. Here you can run tutorials, by real-life chess pros such as Josh Waitzkin, Bruce Pandolfini, and Larry Evans, on everything from moving the pieces to setting up elaborate attacks and defenses. The game lets you specify your level of instruction: beginners can run basic tutorials and drills, intermediate players can practice openings or take the Larry Evans Endgame Quiz, and experts can solve challenging chess puzzles or try advanced drills.

The game provides a Kids' Room, which offers a simplified interface and basic drills to help youngsters hone their chess skills. There's also a Database Room for true chess fanatics. A data miner's paradise, this room contains information on more than half a million real-world chess games—some collected as recently as 2002. Here you can analyze openings, add new game content, and much more.

Chessmaster 9000 includes all the trappings of its Windows counterpart, but thanks to a complete interface overhaul by Feral, it feels like a Mac game. It even connects to iTunes so you can listen to your playlists as you compete. You can also set your iChat status to let others know when you're playing chess. The game offers online play, but you're limited to competing against other Mac gamers.

Feral lists the minimum hardware requirement as a 700MHz G4. But even with my 1.5GHz G4, I ran into some occasional pokiness when loading different parts of the game. However, the slowdowns didn't detract from the otherwise excellent and trouble-free experience.

The Bottom Line Feral Interactive's Chessmaster 9000 is the best chess game you can buy for the Mac. It's an absolute must-have for chess fans who want serious competition and training.

Sick and Twisted

If you're easily offended or simply prefer to see the best in people, do us both a favor and skip to the next review. Postal 2: Share the Pain, by Running With Scissors, is not the game for you. In fact, it is, without question, one of the most unabashedly violent and politically incorrect games I have ever played. (It has actually been banned in some countries.) Consider yourself warned.

That said, I have to shamefully admit that I liked this game. I couldn't help but laugh out loud—not only at the sick, and often stupid, jokes and vile behavior, but also at the pure outlandishness of it all.

Postal 2 is more or less a standard first-person shooter (FPS). You must complete a series of mun-

continues

CHESSMASTER 9000
RATING: ♦♦♦♦½
PROS: Deep data-mining tools; wide variety of boards and computer-controlled opponents; good OS X integration; supports all skill levels.
CONS: Occasional slowdowns.
PRICE: $40
COMPANY: Feral Interactive, www.feralinteractive.com

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Having a Bad Day Postal 2: Share the Pain lets you unleash your darker side on anyone who crosses your path.

dane missions—such as going to the bank, getting milk, and having your venereal disease treated. Entertaining cinematic sequences introduce you to each new mission and the storyline's twists.

Although you can accomplish most of these tasks without ever resorting to violence, the game strongly encourages you to let loose your dark side. That's where the guns come into play. And the hand grenades. There's also a shovel you can use to decapitate your foes, and an anthrax-ridden cow's head that makes anyone within its explosive radius vomit blood uncontrollably. Oh, and did I mention that you can pour gasoline on people and light them on fire?

Postal 2 is, at least on some levels, a ham-handed satire that pokes fun at everything from the gaming industry to modern politics—and few groups escape the barbs. Former child star and California gubernatorial candidate Gary Coleman even takes the heat at one point.

Unfortunately, the twisted fun can't mask some basic flaws that mar the game's execution. The game is set in a sprawling town. But each area is zoned and must load separately—which often leaves you tapping your fingers on the table for a few moments. And the interior level design is also a bit plain and unfinished in places.

The game's physics engine supports "rag doll" body motion, which offers some entertainment value as corpses get blown hither and yon. And the occasional pyrotechnic effect will send cars and trucks careening into the sky, Hollywood-style. However, the computer-controlled characters are often dumb as bricks—running continuously into walls and doing other incredibly stupid stuff.

In addition to the original, single-player version of Postal 2, the Mac release includes the Share the Pain multiplayer add-on, which was released separately for the PC. This is good because you'll get barely a dozen hours of play out of the single-player mode. The Share the Pain add-on includes 14 multiplayer maps, a server browser, and a variety of dedicated multiplayer game modes such as Grab (where you grab bags that make you stronger), Deathmatch, and Team Deathmatch.

The Bottom Line Rude, crude, and socially unacceptable, Postal 2: Share the Pain doesn't merely cross the line of good taste—it obliterates that line in a blaze of gasoline-fueled glory. Still, it's sick and twisted fun for gamers looking for a different take on the FPS experience. Just expect to feel dirty and a bit ashamed afterwards.

POSTAL 2: SHARE THE PAIN
RATING: ♦♦♦½
PROS: Multiplayer mode extends limited single-player game play; twisted fun.
CONS: Slow-loading levels.
PRICE: $30
COMPANY: Running With Scissors, www.gopostal.com

Parasol with a Punch

Parasol Wallop is an interesting twist on the classic brickbashing theme, which has been around since the earliest days of arcade gaming. It's also family-friendly—although the fast pace is likely to frustrate gamers with underdeveloped hand-eye coordination.

In Parasol Wallop, you are little Audrey, a pink-haired young lass who must fend off monsters attacking from the sky. Armed only with your magic umbrella, you'll bounce a ball against layers of bricks overhead, in order to knock monsters to the ground and then cage them. If you begin to lose control of the ball, a quick twirl of the magnetic parasol will attract it. But learning to use that special twirl properly takes some time—the magnetic

continues

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FIRST LOOK | Close Combat: First to Fight

Squad-based, first-person shooters tend to be a bit unwieldy. There's too much information to keep track of: you have to maintain situational awareness of not only yourself but also your team—all while working with a cumbersome, complicated interface. And frankly, I just don't feel that connected to the action. So while I've played plenty of these games over the years, they're not usually the ones I return to again and again. But Destineer is changing this with Close Combat: First to Fight, a new FPS that lets players focus on smart, realistic combat action rather than complex menus. Better yet, it's coming out simultaneously for Mac, Windows, and Xbox consoles.

First to Fight shows you what it's like to be a United States marine fighting a close-quarters urban war in the Middle East. Set in Beirut, Lebanon, in the near future, you and your team must protect yourselves as you complete missions to help quell an insurgency. The game is bound to hit close to home for those who are sensitive to what's been happening in Iraq and Afghanistan.

The developers of First to Fight worked with the military and veterans returning from Gulf War combat to bring a sense of realism to the game's action. When searching out enemies, for example, you and your team will use Ready Team Fire Assist (RTFA)—a tactic that the Marines use in close-quarters environments to give their teams 360-degree coverage and target any enemy that comes into range. If you get into real trouble, you can call for the appropriate backup—close air support from Cobra gunships, mortar strikes, tank shelling, specialized sniper teams, and more.

But the game's realism isn't limited to military action. First to Fight actually uses psychological modeling for both your team members and your enemies. If your rifleman feels fatigue and fear, he may lose his focus and let his efficiency suffer. (By the way, it's a very good idea *not* to shoot a teammate by accident, as that will definitely have a negative effect on his mental state.)

First to Fight's level design is very linear, which only makes sense under the circumstances: this is street-to-street (sometimes room-to-room) urban fighting. You typically have a start point and an end point, and it doesn't make much sense to double back on yourself. Despite that, the game's level design is very creative and often very challenging.

First to Fight forgoes the traditional jumble of keyboard commands that makes other game interfaces so unwieldy. Instead, you simply press your second mouse button to access an easy-to-use radial menu. (I presume you replaced your Apple mouse a while ago if Mac gaming means anything to you at all.) This radial menu is contextual, so it changes depending on the circumstances—you can use it for everything from healing wounded team members to preparing your team for an enemy takedown. It's a very cleverly implemented and intuitive system that takes little or no time to learn, so game play is fluid and fast-paced.

Thanks to an entirely original gaming engine, First to Fight looks great regardless of the platform you're playing on. This means you won't suffer the usual performance penalties that result when games have been converted from other platforms. MacSoft expects to ship the game in March.

The Bottom Line Close Combat: First to Fight is an evolutionary jump in squad-based first-person shooters. It hits all the right notes. Even if this genre hasn't appealed to you before, First to Fight is worth a look.

Hoo-ah! In Close Combat: First to Fight, you'll need to be prepared for any combat situation—even in the laundry room.

BETA TESTED

CLOSE COMBAT: FIRST TO FIGHT
PROS: Simultaneous release on the Mac, PC, and Xbox; psychological modeling; easy-to-use menu system.
CONS: None significant.
PRICE: $40
COMPANY: MacSoft, www.macsoftgames.com

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Monster in Your Parasol Brickbashing gets a new twist in Parasol Wallop.

PARASOL WALLOP
RATING: ♦♦♦♦
PROS: Family-friendly gaming; runs in windowed mode.
CONS: May be challenging for young players.
PRICE: $15
COMPANY: F.C. Covett, http://parasolwallop.playmacgames.com

attraction can also pull the ball to the ground and kill you.

The game contains about 80 levels and is spread over four differently themed worlds, including a beach and an industrialized wasteland. An upbeat soundtrack and whimsical sound effects complete the package. The game runs in windowed mode—a feature I particularly appreciate because it means I can leave other applications running in the background and pause Parasol Wallop if, say, an important e-mail comes in.

With 32-bit graphics and OpenGL effects, Parasol Wallop isn't the lightweight confection it might seem from the screenshot. There's a lot of game here—especially for fans of the brickbashing genre. However, the system requirements are relatively modest. They call for a 450MHz G3 or faster.

The Bottom Line A refreshing change from the endless stream of shooters and strategy games on the market, Parasol Wallop harks back to a time when games were a lot of fun without being overly complicated.

Apeiron's Return

Ambrosia Software has finally reworked Apeiron, one of its most beloved Mac arcade games, for OS X. And this version, which adds 16-bit graphics, is as much fun now as the first release was a decade ago.

Apeiron X is a tribute to the Atari arcade classic Centipede. According to the game, your energy has been embedded in a crystal shard broken from a magical looking glass that peers into another world—a psychedelic twist to Lewis Carroll's *Alice in Wonderland*. You suddenly find yourself in a field of mushrooms inhabited by unworldly beasts such as Cheech the Pentipede, Larry the Scobster, and Gordon the Gecko—all of whom dedicate themselves to making your life miserable. You use bursts of plasma to disintegrate these pests. Each time you eradicate a complete segment of the pentipede, the level ends. Along the way, you can pick up extra points in the form of "yummies." You'll also get bonus points for killing the pentipede in a timely manner. Pick up multipliers, and you'll extend your bonus points at the end of each round. It's maddening, exhilarating fun.

Apeiron costs just $15. So if you haven't already gone crazy with this game, now's your opportunity. Best of all, if you registered Apeiron back in the day, the OS X upgrade will cost you only $5.

Classic Reborn Mac arcade classic Apeiron gets new life in OS X.

The Bottom Line Apeiron X is as satisfying today as it was ten years ago. If you enjoy arcade action, you should certainly check it out. □

APEIRON X
RATING: ♦♦♦♦
PROS: Yummies and power-ups help accentuate classic arcade play.
CONS: There's no ending.
PRICE: $15
COMPANY: Ambrosia Software, www.ambrosiasw.com

MacCentral.com Senior Editor PETER COHEN fell violently ill shortly after playing Postal 2. He suspects it was a case of divine retribution.

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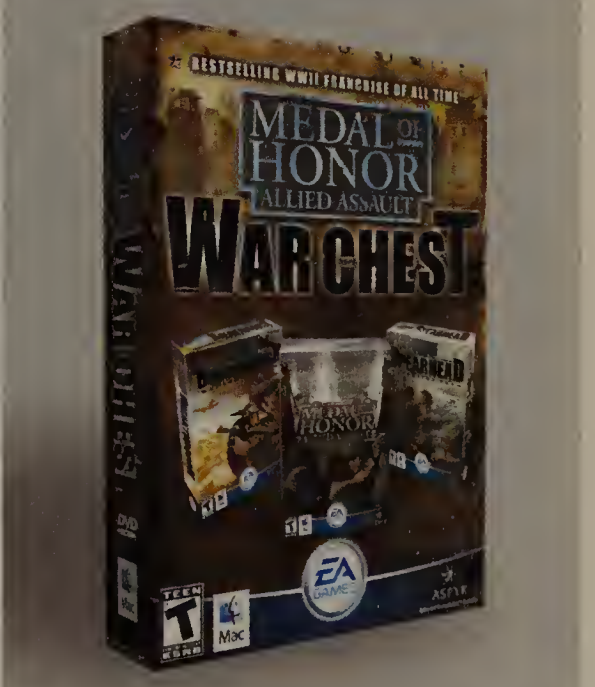

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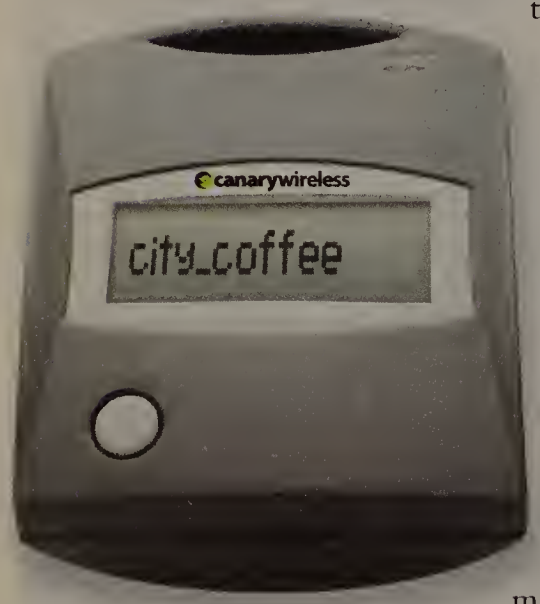
> Digital Hotspotter
> Jiggler
> RePorter
> CLIX

Mac Gems

On-the-go laptop users frequently find themselves looking for wireless networks to connect to for a quick e-mail check or surfing session. In the December 2004 issue, I reviewed Marware's $30 WiFi Spy (●●●●; www.marware.com), my favorite way to check for wireless networks.

My one major criticism was that it didn't differentiate between open and closed networks—you still had to open your laptop and try to connect. Now that Canary Wireless has released its $50 **Digital Hotspotter** (●●●●; www.canarywireless.com), my laptop bag has a new Wi-Fi finder. Like the WiFi Spy, the Hotspotter can detect the presence and strength of wireless networks (but, in my tests, with a slightly better range). However, rather than using multiple LED lights to indicate the strength of nearby networks, the Hotspotter includes an LCD that displays textual information about each network, including its SSID (displayed as "cloaked" for private networks); wireless channel number; signal strength; and, perhaps most important, security (that is, whether it requires a password). Road warriors will welcome this final bit of information with open arms, as it lets you keep your PowerBook or iBook in your bag until you've found an open network.

On the other hand, if you have access to a secure network but you've got a case of encryption paranoia, the Hotspotter will tell you whether that network is using WEP or WPA encryption. Even better, the Hotspotter can differentiate between multiple networks: after you press the scan button, the Hotspotter provides detailed information on the strongest network it finds in your vicinity. Pressing the button again displays information on the next-strongest network, and so on.



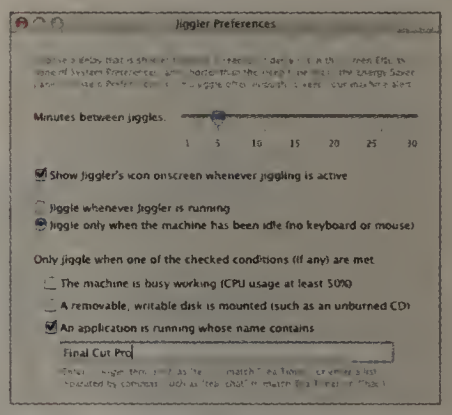
Extreme Wi-Finder Sniff out Wi-Fi hotspots with the Digital Hotspotter.

The Hotspotter does, however, have a few minor flaws. The most obvious is its size: the Hotspotter requires two AA batteries and is a bulky 2.5 by 2.2 by 1.0 inches—more suitable for a laptop bag than for a key chain. I also wish the LCD had a backlight for easier viewing in dimly lit meeting rooms. Finally, the company says that the default settings on a small number of access points prevent the Hotspotter from detecting them even when units such as the WiFi Spy can find them.

That said, in my tests using known access points from various manufacturers, the Hotspotter never failed to detect a network. For now, this Wi-Fi finder is in a league of its own. If you don't mind its bulky size, it will make a great addition to your travel bag.

Watch It Wiggle

Although some *Mac Gems* picks are full-featured applications, others are simple tools that do simple things that only some people really need to be able to do. Take Stick Software's free **Jiggler 1.2** (●●●½; www.stick software.com)—all it does is jiggle your mouse cursor periodically to keep your Mac awake. Why would you want to do this? Perhaps you're running SETI@home. Or maybe you've discovered the bug in Final Cut Pro 4 that can result in an application freeze during rendering if you don't move the mouse periodically. Or perhaps you're engaging in the big no-no of installing an OS X software update on your PowerBook while running off the battery. In each of these cases, Jiggler can keep your Mac from sleeping.



Mouse Shaker Jiggler keeps your Mac from falling asleep at the wrong times.

Granted, you could set your Mac to never sleep, in the Energy Saver preference pane, but that isn't necessarily good for your Mac or for energy conservation. And changing your settings just for specific tasks can turn into a hassle.

Simple as it is, Jiggler does provide a few handy options: you can choose how frequently it jiggles your mouse; set the app to jiggle only when you haven't actually been using the mouse; and set particular conditions under which Jiggler should, well, jiggle (when the CPU is busy, when a writable CD or DVD is mounted, or when a particular application is running). Most people won't need Jiggler, but those who do will find it exceptionally useful.

Port Access

Over the years, one of the most common criticisms of Apple's Power Mac computers has been the lack of front-panel ports and jacks—you have to reach behind (or, if your Power Mac is on the floor, crawl behind) the computer to plug in or unplug acces-

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Extension Ports The RePorter puts your ports within easy reach.

sories such as keyboards, printers, scanners, and speakers. And temporary peripherals—those you connect only when you're actually using them, such as digital cameras, portable hard drives, headphones, and microphones—are even more of a hassle. Apple finally included single FireWire 400, USB, and headphone ports on the front of the Power Mac G5, but the truth is that Windows PCs have had such convenience features for years.

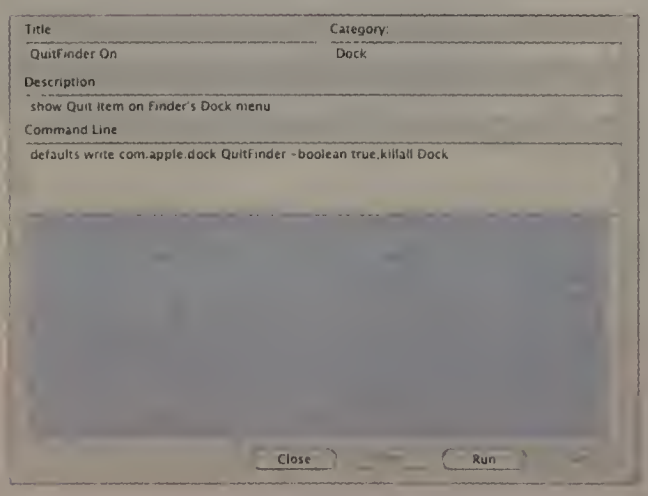
I've finally found an elegant solution to this problem in Marathon Computer's $59 **RePorter** (●●●●; www.marathoncomputer.com)—put simply, it's an extension cord for your ports. Connect the cables at one end of the RePorter to the ports on the back of your Power Mac, iMac, or eMac. At the other end of the RePorter's 5-foot-long cable is a 3-inch globe with a flat face that provides six ports: FireWire 400, FireWire 800, headphone (audio out), audio in, and two USB 2.0 ports.

You obviously lose these ports on the back of your Mac, but if you don't need easy access to a particular port, or you prefer to use the one in back, you can simply choose not to connect the RePorter to that port. One nice touch is the unit's internal light: when the RePorter is connected to a USB port on your computer, this light casts a subtle blue glow around the ports on the device's body, making them easier to identify in the dark.

My only significant complaint about the RePorter is that its round body gives it a tendency to roll around a bit when sitting on a desk or on top of a computer. But I've been waiting for something like the RePorter for a long time. It's one of those "Why didn't anyone else do this sooner?" products that provide an important feature: convenience.

Point and CLIX

You may love Mac OS X, but using Terminal can be a bit intimidating. If you've used a few Terminal commands that you've seen on the Web but you don't really understand the ins and outs of the command line, you're a prime candidate for Rixstep's free **CLIX 1.5** (Command Line Interface for OS X; ●●●½; http://rixstep.com/4/0/clix/), a utility for storing and running Unix commands.



Unix Notepad CLIX stores—and runs—your favorite Terminal commands.

CLIX includes a default database containing more than 450 Terminal commands that perform useful actions in OS X—many of them usually inaccessible—categorized by the aspect of the interface they affect (Dock, Finder, Security, and System, for example).

Double-click on any command, and CLIX presents a dialog box that shows a title, a category, and a description, as well as the command itself. To execute the command, click on the Run button (you can use the Copy button to copy this output to the Clipboard for pasting into another application). You can also edit or customize commands in the Command Line field.

Because you're working with valid, proven commands, CLIX is a useful tool for learning Unix. But what really won me over was CLIX's ability to store personalized commands—either in the default database or in a new database. This feature is so useful on its own that CLIX may become a reference guide for your collected Unix tidbits even if you never touch its default database.

Some of the commands in CLIX's default database do pretty serious things, so read a command's description before running it; if you don't understand the command, then don't run it. This is especially true for commands that require administrative access.

Changing Names

Products featured in *Mac Gems* usually get a mouse rating—but since I was involved in creating the following utility, this is an exception.

One of the most frequent questions I get is how to change short user names in OS X. Apple makes it easy to change your long user name. But if you try to change your short user name—your official account name in OS X, most easily identifiable as the name of your user folder—you'll find that this field is grayed out and inaccessible.

When working on my book *Mac OS X Power Tools* I decided to include a thorough procedure for changing your short user name. With nearly 20 steps, though, it wasn't exactly user-friendly. So I enlisted the help of James Bucanek—the book's technical editor and a Unix scripting expert—to turn my manual procedure into an easy-to-use utility.

A lot of hard work on his part resulted in the free (donations accepted) **ChangeShortName 1.1** (www.macosxpowertools.com), a Unix shell script and accompanying GUI helper application that lets anyone change a short OS X user name with a minimum of fuss. If you're a Unix geek, you can run the ChangeShortName shell script from within Terminal; if not, you'll want to use the included ChangeShortName Helper utility.

Before you rush off to download ChangeShortName and start changing all your user names, a warning is in order: Changing the short user name is a procedure that involves the modification of some serious system files. Be sure to check out the Read Me file that comes with the utility.

GO TO WEBLOG:

The Mac Gems Weblog (www.macworld.com/weblogs/macgems/) contains longer versions of these reviews, as well as some Web exclusives.

Senior Writer DAN FRAKES (www.danfrakes.com) is the author of *Mac OS X Power Tools*, second edition (Sybex, 2004), and he is the reviews editor at Playlistmag.com. Send your thoughts on this column, or on things you'd like to see in future columns, to macgems@macworld.com.

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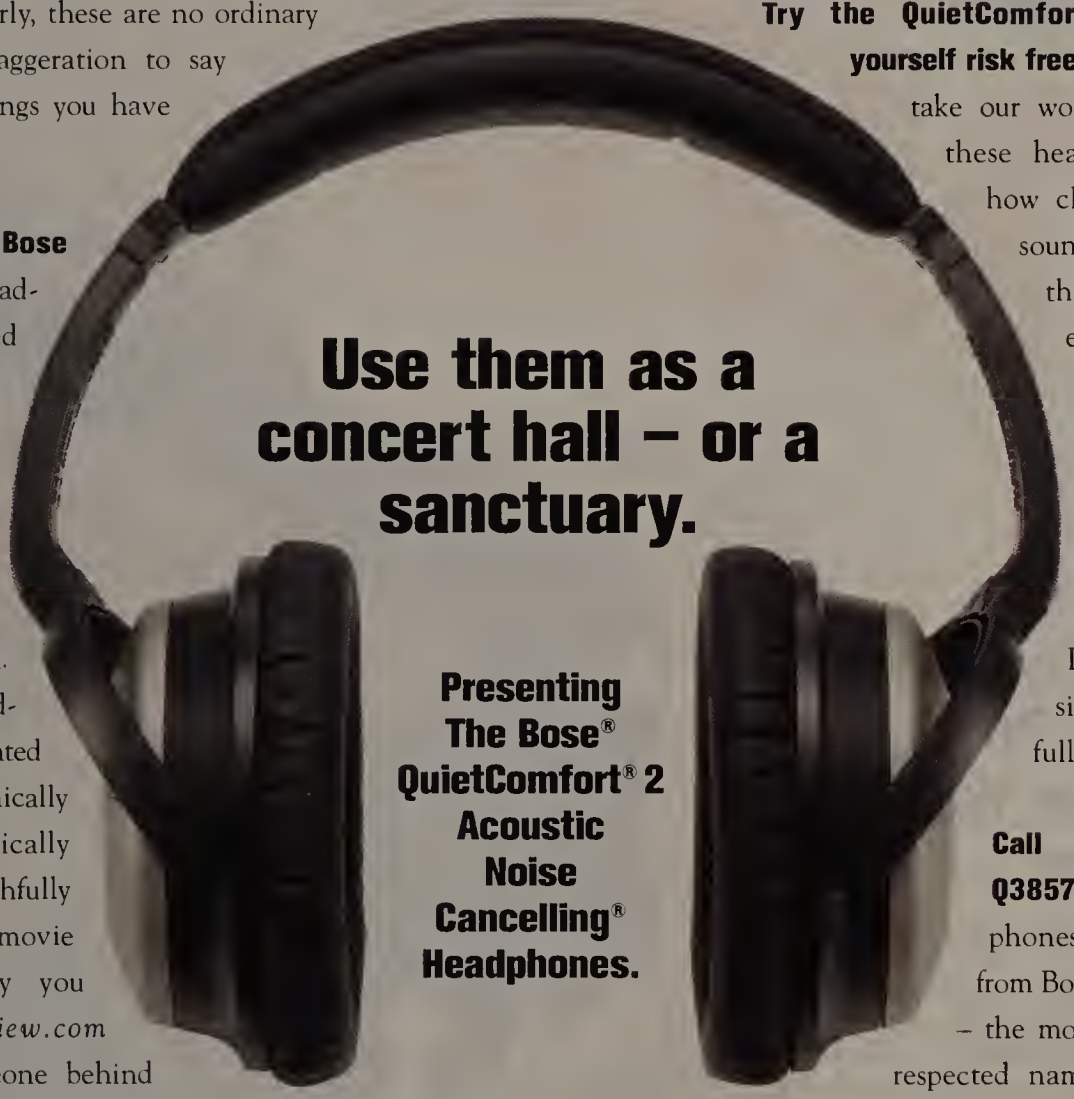

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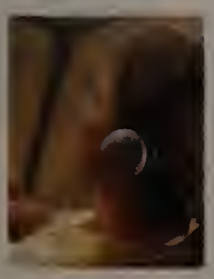

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Inside the Mac mini

You've Seen the Tiny Case. Now We Take Out the Putty Knife to Show You What's Inside.

At first glance, the most notable thing about the Mac mini is its price: $499. But on closer inspection, it's also something of an engineering marvel: a powerful PC that fits inside a tiny, 2.9-pound, 84.5-cubic-inch box. Since the day the Mac mini was announced, we've been bombarded with questions about it, from the general ("How does it work?") to the extremely particular ("Can I install an AirPort Extreme card myself?").

To satisfy that curiosity, we decided to crack open a Mac mini, take an in-depth look at what's inside, and find some answers to the most commonly asked questions about this tiny new addition to the Mac family.

BY JASON SNELL

PHOTOGRAPHY BY PETER BELANGER

Bluetooth and AirPort Antennas

These shiny silver things are the Mac mini's two wireless antennas. (If you haven't bought either of the mini's wireless options, you won't see these.) The larger one (back right, clipped to a plastic post) is the AirPort Extreme antenna; the smaller one (front left, clipped to the side of the optical drive) is for Bluetooth. To improve reception, Apple cut small rectangular holes in the metallic lining beneath the computer's white plastic lid.

Speaker

Every Mac comes with a speaker, and the Mac mini is no exception. But like the rest of the system, the mini's speaker is really, really tiny. If you want a decent multimedia experience, you'll need to invest in some external speakers.

Mac Mini FAQs

Do I really need more than 256MB of RAM?
We think so. With 256MB of RAM, the mini's main memory will fill up quickly, forcing the system to offload excess data to the relatively poky hard drive. 512MB is really the minimum amount of RAM we recommend for any Mac today; 1GB is preferable.

Should I buy RAM from Apple, or can I install it myself?
At press time, Apple was charging $75 for 512MB of RAM in the mini, and $325 for 1GB. (Since the mini has only a single RAM slot, Apple is essentially charging these prices *and* recouping the cost of the 256MB module it doesn't have to install in your system.) At the same time, we were able to find 512MB modules from other vendors for as little as $66, and 1GB modules for as little as $164. So if you want to save money, you should seriously consider ordering your mini with the base 256MB and then swapping out Apple's module for a larger one you purchase yourself, especially if you want 1GB of RAM.

I want to save money but I'm not too technical. Should I just buy Apple's RAM?
Maybe. Installing RAM in the Mac mini is the easiest upgrade you can perform on the machine. If you've got a putty knife handy, are comfortable pulling RAM, and can look at the exposed guts of a computer without feeling faint, you can do it. But if you haven't installed RAM in a system before, the mini is probably not the best place to start.

If I don't order my system with Bluetooth, AirPort, or both installed, can I add them later?
Not by yourself. But you can get an Apple specialist or someone at an Apple Store to add them for you. If you're planning on using Bluetooth or AirPort on the Mac mini at any point during its life, just order it now and save yourself the trouble.

Can I replace the hard drive?
Yes, but only if you're a serious hardware hacker. For starters, you'll need to remove the optical drive, lift the entire internal plastic frame from the logic board, and then remove the fan. Only then will you have access to the four screws you need to remove before unhooking the drive. Instead, might we suggest an elegant external FireWire hard drive?

Does the Mac mini have an audio-in jack? How about digital audio-out?
No and no. For both, consider an external USB or FireWire device that supports audio input (such as the Griffin Technology iMic; find.macworld.com/0305) or digital audio output (such as M-Audio's Transit; find.macworld.com/0306).

I've got a VGA monitor. Will the Mac mini work with it?
Yes. The Mac mini comes with a DVI-to-VGA adapter—just a small plastic block you push onto the DVI connector. To attach it tightly, simply turn the two plastic wheels on either side of the adapter.

I've got a USB keyboard and mouse from a PC. Will they work with the Mac mini?
Yes indeed. OS X natively supports the mouse's second button (and scroll wheel, if it's got one). You might want to use DoubleCommand (find.macworld.com/0307) to swap the Windows and Alt keys; otherwise, you may keep pressing the option key when you mean to press the ⌘ key.

Optical Drive

The Mac mini's optical drive—either a CD-burning and DVD-playing Combo drive or a CD- and DVD-burning SuperDrive—is the same small, slot-loading drive used in Apple's PowerBooks. So if you wanted to upgrade the drive sometime in the future, you could theoretically swap in a different slot-loading laptop drive.

Wireless Card

You won't find the Mac mini's wireless card on systems that don't have either Bluetooth or AirPort Extreme installed. It accommodates a standard AirPort Extreme card and a special Bluetooth module. Unlike previous Macs, the mini can be upgraded with internal Bluetooth connectivity later if you didn't order it that way.

Heat Sink

Beneath this heat-dissipating module is the Mac mini's G4 processor, running at either 1.25GHz or 1.42GHz.

Modem

This small card is the Mac mini's built-in 56-Kbps modem; wires connect it to the telephone port on the computer's back.

Interconnect Slot

The interconnect board on the Mac mini's plastic internal frame connects to this slot.

RAM Module

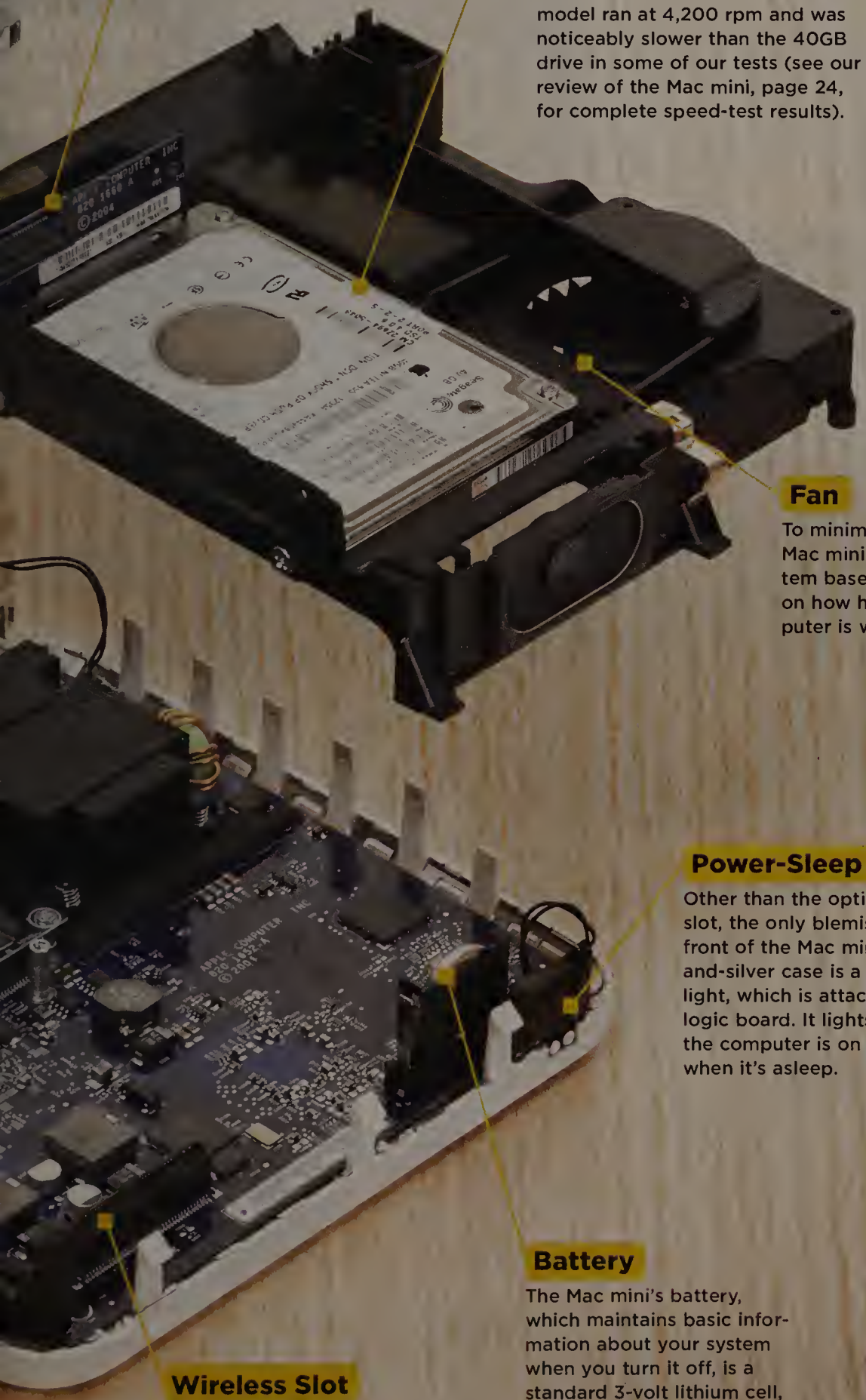
According to Apple's specs, the Mac mini uses PC2700 RAM, which runs at 333MHz. However, all the Mac minis we looked at came with PC3200 RAM (which can run at speeds as high as 400MHz). Even so, in the Mac mini, the PC3200 RAM will run at PC2700 speed. Apple says that the Mac mini supports as much as 1GB of RAM. Although modules with more than that are starting to appear, it's unclear whether the mini will support them.

Interconnect Board

Attached to the plastic internal frame, this card connects the Mac mini's hard drive and optical drive to its logic board; it also supplies power to the mini's fan and audio to its speaker.

Hard Drive

The Mac mini's hard drive is the same size and speed as the drives used in laptops. Although Apple says that the drive spins at 4,200 rpm, that's not entirely accurate: The 40GB drive we examined was a 5,400-rpm model. The 80GB model ran at 4,200 rpm and was noticeably slower than the 40GB drive in some of our tests (see our review of the Mac mini, page 24, for complete speed-test results).



Fan

To minimize noise, the Mac mini's cooling system bases the fan speed on how hard the computer is working.

Power-Sleep Light

Other than the optical-drive slot, the only blemish on the front of the Mac mini's white-and-silver case is a small white light, which is attached to the logic board. It lights up when the computer is on and pulses when it's asleep.

Battery

The Mac mini's battery, which maintains basic information about your system when you turn it off, is a standard 3-volt lithium cell, the kind found in watches. If yours dies, you can replace it almost as easily as you can replace RAM.

Wireless Slot

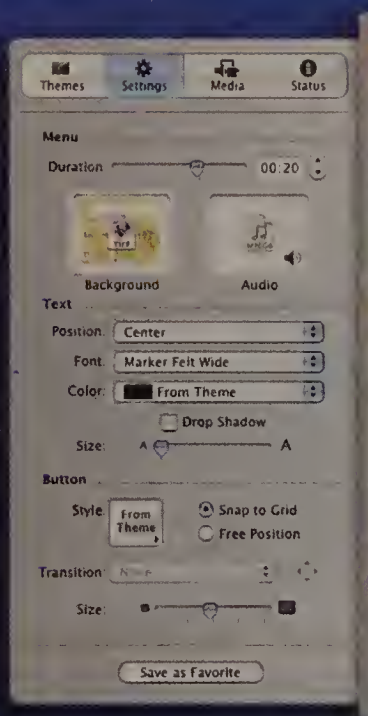
The wireless card, featuring a Bluetooth module and/or an AirPort Extreme card, attaches here.

Cracking Open the Mini

Opening the Mac mini is relatively easy, but it isn't a job for the faint of heart. To crack the case, turn the mini upside down (on a very soft surface, or else you may scratch the top). Carefully insert a thin putty knife on one side of the mini's undercarriage, between the white plastic and the silver aluminum. Then gently tilt the knife until that side of the case lifts up and you hear a subtle popping sound. Repeat this procedure on the other side. (It's a bit more difficult to insert the putty knife on the second side—if you've got two knives, you can try inserting one on each side and then popping the sides simultaneously.) When both sides have popped, you should be able to lift the computer out of its housing without too much trouble.

Once you're done doing whatever you want to do inside, just pop the cover back on, taking the utmost care to line up the back of the case correctly; it must slide in perfectly, just above the Mac mini's ports.

Note that although opening up the mini won't void your warranty, Apple would clearly prefer that you leave the surgery to the experts at your local Apple Store.



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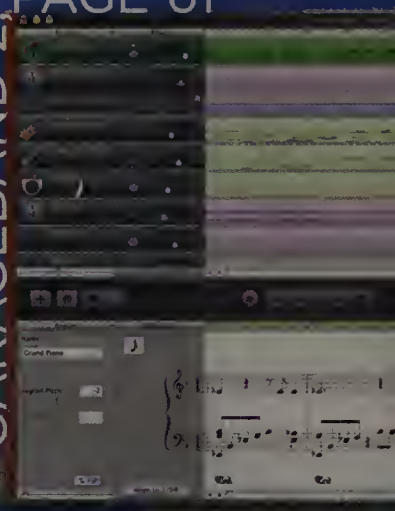

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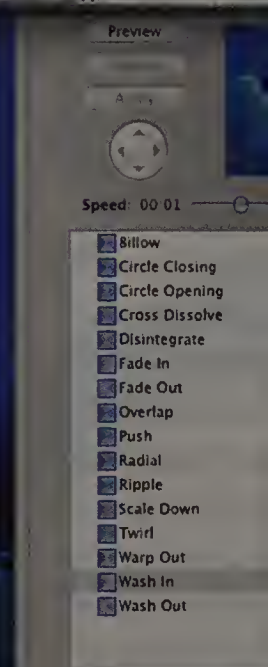
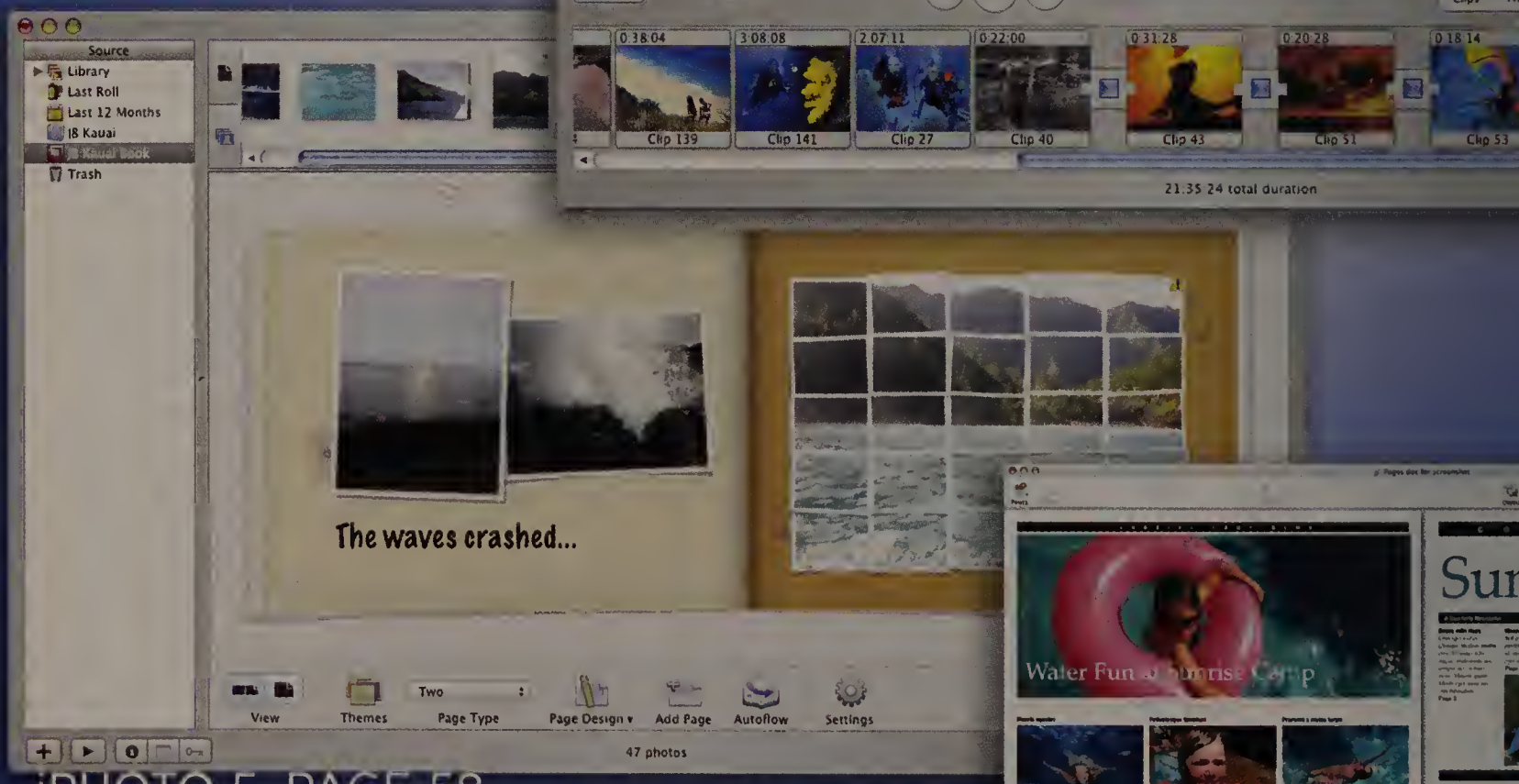
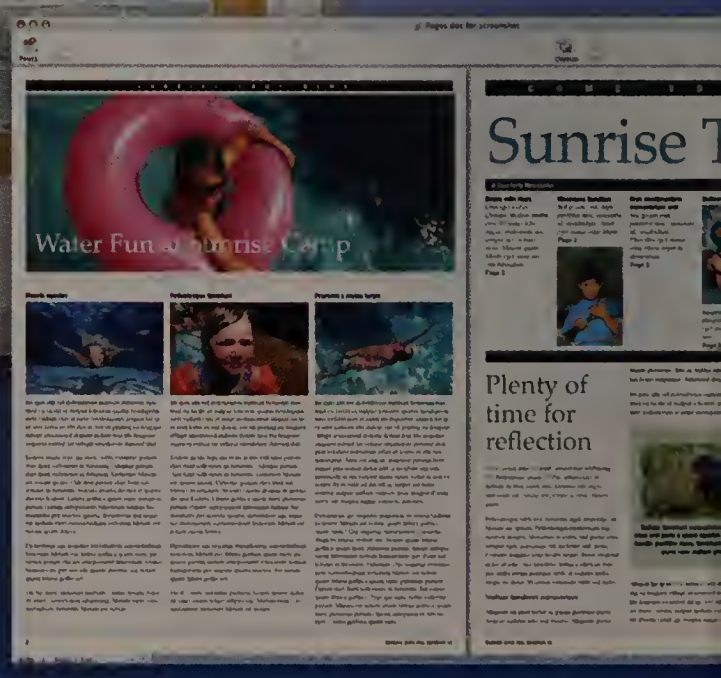
iMOVIE HD, PAGE 59







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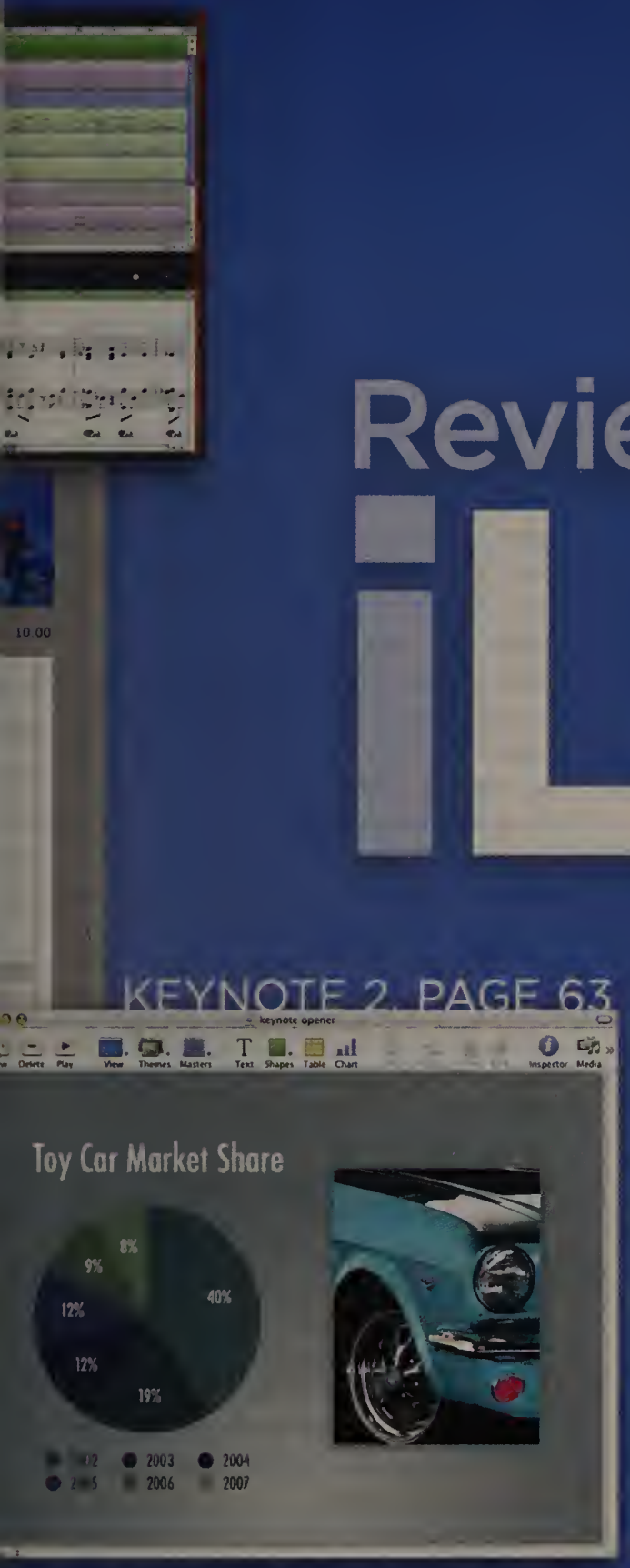
WILL APPLE'S LATEST SUITES HIT THE SPOT?

Reviewed: iLife '05 and iWork '05



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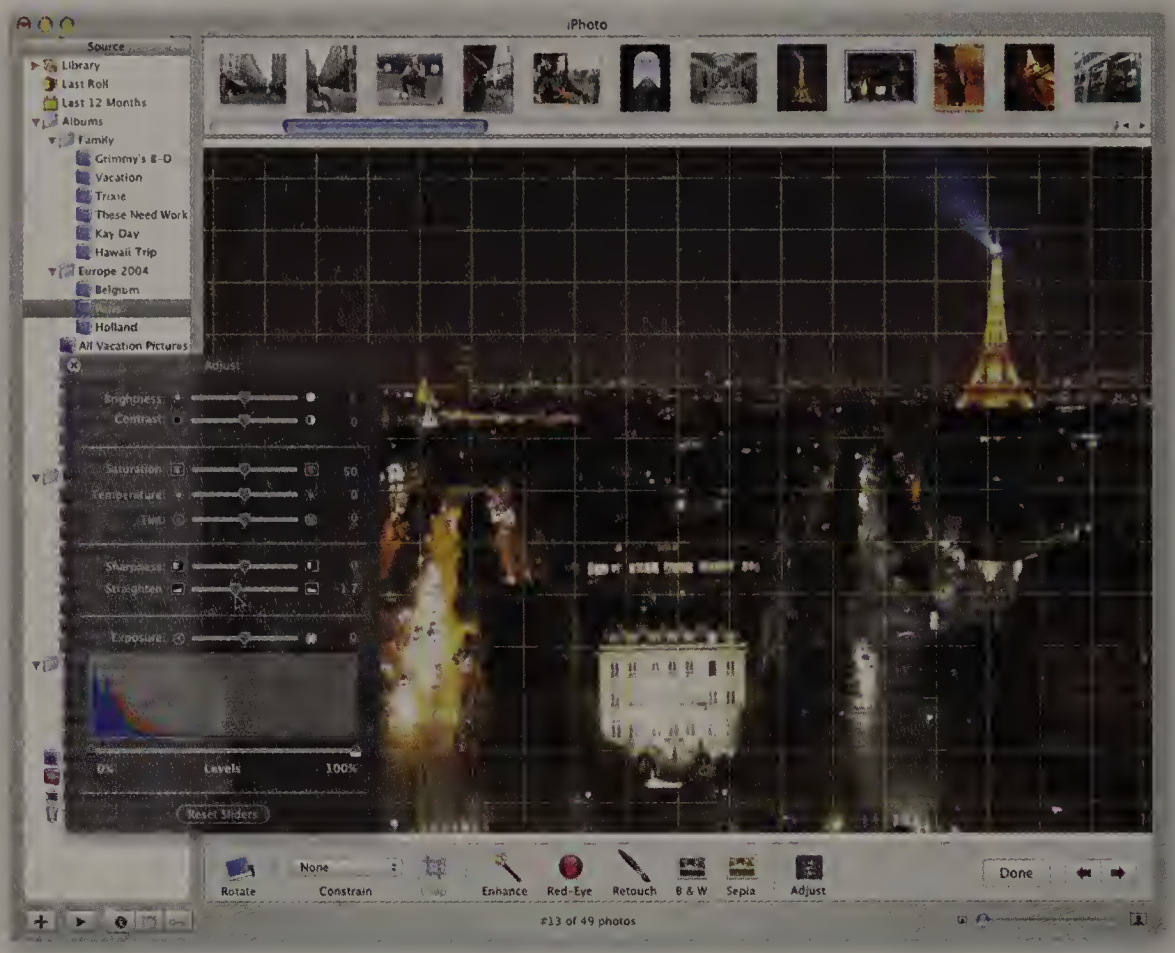
With Apple's iLife applications—iPhoto, iMovie, iDVD, iTunes, and GarageBand—you can do almost anything you want with your video clips, photos, and music. In the new version of this suite, iLife '05, you'll find fantastic new themes; a new Media Browser that lets you tie your audio, photos, and video together; and tons of improvements that make these fun-to-play-with apps even easier to use. But they provide more than enjoyment: this is Apple's most ambitious iLife release, with some nearly pro-level features. So the suite provides lots of growing room for people just starting out with their digital media collections. Best of all, the suite costs only $79. But as you'll see in these reviews, the updated iLife apps aren't without their oddities. (For our review of iTunes 4 [★★★★], go to find.macworld.com/0291 or see our July 2003 issue.)

And now Apple is doing for Mac-based businesspeople what it did for home users: with the new iWork '05—which includes Keynote 2 and the brand-new Pages—anyone can make professional-looking presentations, newsletters, brochures, and more. Unlike AppleWorks, which is free with all new Macs and includes word processing, spreadsheet, drawing, and painting tools, iWork '05 costs $79 and includes only a word processor and a presentation program. We took a good, hard look at iWork '05 to find out whether it's ready for the boardroom.



Making Changes With iPhoto's new Adjust panel, you can fix problems in your photos and even straighten crooked photos.

iPhoto 5

Sweeping Update Improves Photo Management, Slide Shows, and Book Publishing

BY JIM HEID

iPhoto 5 is the most wide-ranging iPhoto upgrade yet, bringing interface improvements; new ways to store, browse, and edit images; and greatly enhanced slide-show and book-publishing features. It's a must-have upgrade for all iPhoto users.

Or at least it will be: iPhoto 5's debut was marred by several major bugs. Version 5.0.1 addressed the most-serious ones, but some problems remain.

A Cleaner Face

When you launch iPhoto 5 for the first time, it updates your iPhoto library for use with iPhoto 5. I updated several libraries containing thousands of photos apiece, and I had no problems.

In iPhoto 5, you'll see that Apple has removed many of the buttons that used to line the bottom of iPhoto's window. Buttons for tasks that most people perform infrequently, such as burning photos to a disc, have been replaced by commands in the new Share menu. You can also use the Share menu to choose which buttons appear at the bottom of the iPhoto window.

Like earlier versions, iPhoto 5 switches into import mode automatically when you connect a camera. But iPhoto 5 lets you assign a name and a description to your "roll" of photos before importing them.

This simple but welcome improvement pairs nicely with iPhoto's new Search box, which lets you base searches for photos on text in their roll names, file names, keywords, or comments.

Another way to locate photos is with the new Calendar pane, which lets you browse your library chronologically. This is a fun way to explore your library—a huge improvement on the halfhearted chronological-browsing features in iPhoto 4. Like iTunes 4 with its smart playlists, iPhoto 5 has smart albums, which let you compile albums based on criteria such as keywords, file names, or dates.

Great Books iPhoto 5 gives you more control over the layout of your photo books. And this version supports double-sided printing to a wider variety of sizes and layouts.

PHOTOGRAPH BY PETER BELANGER

Enhanced Editing

iPhoto 5 sports a remodeled digital darkroom. With the new Adjust panel, you can fix color and exposure problems and sharpen and straighten images (see "Making Changes"). However, I wish that iPhoto let you, as Photoshop does, identify white points or black points you've inadvertently removed.

The Exposure slider lets you improve a photo's brightness with more precision than the Brightness and Contrast controls. It works well, but I found that Photoshop Elements 3 did a better job of recovering details from bright highlights and dark shadows.

From Movies to Raw

iPhoto 5 adds the ability to transfer and store movie clips created by digital cameras. And advanced photographers will appreciate iPhoto 5's ability to transfer and store photos in Raw format—the unprocessed "digital negatives" that a growing number of cameras can shoot.

Unfortunately, iPhoto's support for raw data is a mixed bag. iPhoto supports fewer Raw formats than Adobe's Photoshop Elements 3 (♦♦♦♦; February 2005) does. What's more, some aspects of iPhoto's raw-image workflow can be confusing. One example surfaces if you've set up iPhoto to open photos in another image editor, such as Photoshop Elements, when you double-click on them. If you double-click on a Raw file to open it in Elements, iPhoto first converts it into a JPEG and then hands off the JPEG to Elements—thus negating the advantages of the Raw format.

In this case, the workaround is simple: drag the Raw photo onto the Elements icon in your Dock. Still, there's room for improvement in the way iPhoto handles Raw photos.

I can't find fault with the Adjust panel's Straighten slider, though. Drag it, and iPhoto simultaneously straightens and crops a photo, superimposing a grid that helps you straighten crooked shots.

Most Adjust-panel features work only on Macs with G4 and G5 processors. On G3 systems, only the Brightness and Contrast sliders are available.

Show Off

Some of the best changes to iPhoto deal with creating slide shows and books. For starters, they are now independent entities of the albums on which they're based: when you create a slide show or a book, a new item appears in the iPhoto window's Source pane, so it's easy to create multiple versions of a project. Better still, making a change to an album no longer changes (and possibly ruins) the books or slide shows based on that album.

Slide shows themselves are showier: you now have far more control over the appearance of slide shows, and you can even apply panning and zooming—the Ken Burns Effect—to photos. However, the Fit To Music option, which is supposed to adjust the length of a slide show so it ends when a song ends, simply doesn't work.

iPhoto 5's book-publishing mode offers a far larger assortment of page designs than that of earlier iPhoto versions, and the mode's layout features are much easier to use. For example, deleting a photo from a page no longer causes photos on subsequent pages to shift.

Macworld's Buying Advice

iPhoto 5 brings welcome improvements in almost every area. The program's new slide-show and book-publishing features are spectacular, and its editing features—while still a far cry from what Photoshop Elements provides—make it easier for imaging newcomers to improve their shots.

Version 5.0.1 fixes iPhoto's most serious problems, so you can upgrade without fear of losing work. But some annoying glitches remain, and iPhoto won't reach its true potential until Apple addresses them.

RATING: ♦♦♦½
PROS: Support for more types of media; greatly enhanced browsing, image editing, and slide-show and book-creation features.
CONS: Limited Raw support; some irritating bugs.
PRICE: $79 as part of iLife '05
COMPANY: Apple Computer, www.apple.com

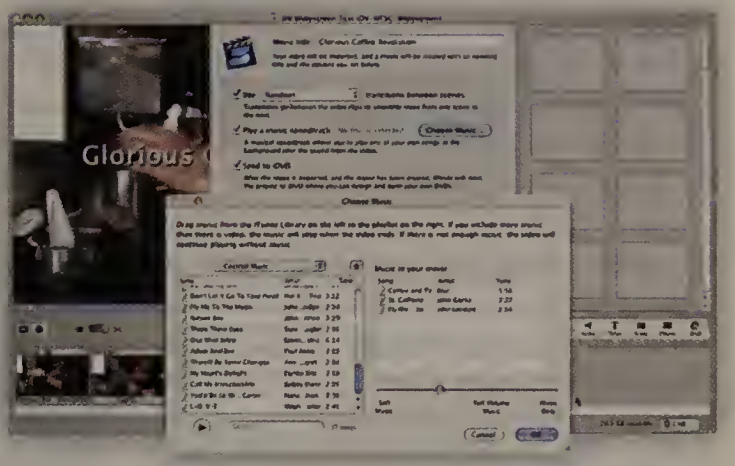
iMovie HD

Addition of HD Editing Steals Limelight from Other Useful Improvements

BY JEFF CARLSON

Now that Apple has thrown down the technology gauntlet and proclaimed that 2005 is the "Year of HD [high-definition] Video," I assume that you've already purchased your $3,700 HD digital camcorder and are now ready to stand at the forefront of the new digital cinema.

Wait, I'm sorry—what's that you say? That camera is too pricey for your budget? And there aren't any movies available on HD-DVD because a standard hasn't yet emerged? Well, yes, that's all true—but HD is so cool!



Presto Change-o The new Magic iMovie feature does most of the work for you. You give your movie a title, choose a type of transition, and pick some music, and iMovie HD rewinds the tape in your camcorder, imports the footage, applies transitions, and includes a soundtrack.

HD Trojan Horse

Adding HD support to the latest version of Apple's entry-level video editor seems to be an odd choice, since most iMovie HD users—at least initially—won't be shooting in the HDV format (see "An HD Primer"). In time, though, prices of HD gear will no doubt come down, and more people will then start buying big, beautiful HD televisions that take advantage of HD's higher resolution.

But in addition to HD bragging rights (take *that*, Windows Movie Maker), iMovie has made impressive gains. The HD version can import 16:9 (widescreen) DV video without hassle, and it imports MPEG-4 (produced by some new tapeless camcorders) and iSight footage without transcoding it into iMovie's traditional DV Stream format. More impressive, iMovie HD allows each format to coexist, without much fuss, in the same iMovie project.

I imported some HD footage, and working with these files revealed a surprise: once the video is in iMovie HD, you edit and manipulate it just as you would DV footage. It's still digital video, despite the increased resolution.

But working with the higher resolution demands at least a 1GHz G4 processor. Editing and playback were a breeze on a dual-2.5GHz Power Mac G5 and only occasionally stuttered on a 1.25GHz PowerBook G4 (working with HD was difficult but not impossible on my old 400MHz Titanium PowerBook G4). HD also requires much more disk space; depending on your footage, you should budget at least four times the amount of storage you'd need for a DV project. (The good news here is that iMovie HD doesn't limit incoming clips to 2GB in size.)

An HD Primer

iMovie HD actually supports a comparatively low-end variety of high-definition video called HDV, which is high-definition footage with MPEG-2 compression applied to it. HDV comes in two varieties, both of which iMovie HD supports: 1080i provides 1,920-by-1,080-pixel interlaced resolution, while 720p offers 1,280-by-720-pixel progressive-scan resolution. (The Sony Handycam HDR-FX1 camcorder [shown] is a 1080i model.) Although it's highly compressed, HDV currently offers more than enough image detail and sharpness for most non-professional editors.

Improvements and Lingering Problems

For the rest of us DV-editing mortals, iMovie HD represents a significant leap toward, well, stability. iMovie 4 (♦♦♦; May 2004), seemed to have more pep and felt smoother on my 1.25GHz PowerBook G4 than iMovie 3—but "more pep" really meant that it didn't stutter or crash nearly as much as before. With iMovie HD, Apple's engineers have ironed out many of the performance problems that plagued the previous two releases.

Aside from HD capability, iMovie HD's feature set is mostly the same as version 4's, with a few exceptions. Chief among them is the ability to rearrange clips by dragging them around in the Timeline Viewer, not just the Clip Viewer. iMovie HD also boasts unlimited undos; and a Magic iMovie feature automatically imports footage from your camcorder, adds transitions and music, and optionally sends the movie off to iDVD for burning.

iMovie HD isn't perfect, of course. The Ken Burns Effect, while not as flaky as before, is still rudimentary and could benefit from more control (such as timing the movements at the start and end of a clip). I also encountered a few random buzzing and popping noises around a few transitions, an issue I've seen reported online by other users. (This doesn't seem to have been fixed with the release of iMovie 5.0.1.)

Macworld's Buying Advice

Unless you're running an older Mac, iMovie HD's performance improvements alone make iLife '05 worth its price. If you're on the cutting edge of HD and have the gear, the program provides a good first step into that world. Although a few outstanding audio and compatibility issues remain, and although I'd like to see Ken Burns (the effect, not the filmmaker) get a makeover, this is the version that loyal iMovie users have been waiting for.

RATING: ♦♦♦♦

PROS: Improved performance and stability; support for HD, wide-screen DV, MPEG-4, and iSight video; Magic iMovie feature; better drag-and-drop capabilities.

CONS: Audio glitches; Ken Burns Effect needs more controls; sketchy performance on older Macs, even those that meet its system requirements.

PRICE: $79 as part of iLife '05

COMPANY: Apple Computer, www.apple.com

iDVD 5

DVD-Creation Program Sees Refinement

BY JEFF CARLSON

Is iDVD 5 the prestidigitator of the iLife '05 suite? Like a world-class magician, iDVD's 15 new themes hold your attention—by spinning and sliding your photos and movies around the screen. But behind the scenes, the DVD-creation program employs a few new tricks that give it more power than I expected to see.

DVD in One Step Similar to iMovie HD's Magic iMovie feature, iDVD 5's OneStep DVD feature grabs video from your camcorder, encodes it, and burns it to a DVD.

More Kindling for the Fire

The most notable improvement in the previous version, iDVD 4, was the ability to burn as much as two hours of movies and photos to a disc, depending on the encoding preset (Best Quality or Best Performance). Version 5 has the same encoding options, but you're not limited to burning to DVD-R media. iDVD 5 can burn directly to DVD+R, as well as the rewriteable DVD-RW and DVD+RW formats, if you have a late-model SuperDrive (for a list of compatible models, see find.macworld.com/0319).

But the best news is that, finally, iDVD no longer requires a built-in SuperDrive to burn discs (but for direct burning from iDVD, this remains Apple's only officially supported method). Now iDVD provides a sensible workaround for people who use external disc burners: Save As Disc Image. This feature takes your project through the normal disc-burning process but wraps it up as a disc image that can be burned successfully from the Finder or Roxio's Toast 6 Titanium (I used the latter in my tests).

Like iMovie HD, iDVD 5 supports HDV and 16:9 (wide-screen) DV—sort of. Until the standards bodies finish duking it out over an HD-DVD specification, iDVD won't be able to burn HD-quality video. However, iDVD converts any HD footage you bring in from iMovie HD (or Final Cut Pro HD) to 16:9 DV so that it will play correctly on wide-screen TVs. iDVD also imports AVI video, which many digital still cameras' movie modes produce.

Instant DVD

Another signature new feature in iDVD 5 is the program's ability to do all the work for you. If you just need to dump video from a DV tape onto a DVD (for example, to assemble the film dailies a director needs to review before the next shooting day), then OneStep DVD can rewind the tape in a connected camcorder, import the footage, and burn it to a disc. The resulting disc doesn't include a menu or any navigation—when you insert it into a DVD player, the movie immediately begins to play.

Magician's Assistant

In general, iDVD 5 feels a bit sprightlier, and it's more graceful and helpful during the DVD-creation process. You can look at the Map view horizontally or vertically, zoom in or out, and use the small disclosure triangles to hide or show branches of a project. You can't reorganize a project in the map—a feature I'd like to see—but you can apply themes to menus and add new menus and slide shows without leaving the map.

Other niceties abound. For example, the Burn Progress window is much more informative, presenting all the steps and indicating where you are in the process. And as iDVD renders your menus and movie footage, it displays a small preview.

Animated Themes

The new themes make for some snazzy visuals, such as the expanding, flying

flowers of Anime Pop. With animated drop zones, you can drag and drop a movie or photo directly onto a theme. But if you're not keen on trying to drop media onto moving targets, you can stop the animation by clicking on the Motion button. Then you can use the new Motion playhead to advance the animation and make each zone visible in turn. Or for a simpler approach, double-click on a drop zone to open the Drop Zone Editor, where you can add media into orderly columns.

Macworld's Buying Advice

You probably wouldn't buy the iLife '05 suite for iDVD 5 alone, but as a complement to iMovie HD, the program is a solid—if incremental—improvement on the last version. If you burn multiple versions of your projects, just the ability to burn onto rewriteable DVD media will probably earn back your investment within a short period of time. And Apple has certainly set the stage for the near future, when HD-DVD media will allow us to watch HD movies on our enormous HD televisions.

RATING: ★★★★
PROS: Lets you burn to multiple DVD media formats or create a disc image; improved Map view; limited HDV support; OneStep DVD feature makes the importing and burning process painless; sensible interface improvements.
CONS: Can't reorder menus in Map view.
PRICE: $79 as part of iLife '05
COMPANY: Apple Computer, www.apple.com

GarageBand 2

Fantastic Upgrade Makes Creative Program Even More Musical

BY CHRISTOPHER BREEN

In early 2004, Steve Jobs enthusiastically unveiled GarageBand, a program that gave even musical novices the power to fashion dynamic soundtracks. But as marvelous as GarageBand was, some users were frustrated by the program's limitations.

Apple has addressed many of the problems with the original release and added some new features that make GarageBand even more musical. Although some features are implemented better than others, GarageBand 2 is a commendable upgrade.

New, Improved, and Needing Improvement

GarageBand 2 takes some of the burden off your processor by allowing you to lock tracks. When you lock a track, it's rendered to your hard drive, freeing the processor to devote its attention to other things—like playing and recording more tracks.

GarageBand 2 can simultaneously record as many as eight digital-audio tracks and one Software Instrument track. In my tests with Mark of the Unicorn's 828mkII audio interface running on a 1.25GHz PowerBook G4, it did just that with nary a hiccup. Musicians who want to record multiple instruments and voices at the same time will find this feature a real boon.

Inputting music for Software Instrument tracks is now easier, thanks to the new Musical Typing feature—a window that lets you "play" your Mac's keyboard by pressing keys that correspond to musical pitches (see "The *Other* Keyboard"). Unlike other on-screen keyboards I've used, this one is responsive and even lets you play chords without an annoying delay.

You can now drag multitrack Standard MIDI Files into the program, where they're split into separate tracks (bass tracks continue to import an octave too low, however). Regrettably, you still can't export MIDI files from GarageBand, though Apple's Logic Express and Logic Audio can open GarageBand files. As with the original GarageBand, you can export your mixed songs as AIFF files.

The *Other* Keyboard With GarageBand 2's new Musical Typing feature, you can use your Mac's keyboard to play notes—and chords.

Other promising features that could use just a touch more refinement are GarageBand's new track-notation view and pitch-shifting functions. The notation view errs on the side of producing legible scores at the expense of rhythmic accuracy—it missed a few triplets and dotted rhythms in my tests. And you can neither change meters and key signatures in these scores nor print the scores. Amateur musicians will appreciate the resulting scores' clarity, but pros needing more notation capabilities should look to Logic Express, Mark of the Unicorn's Digital Performer, or Steinberg's Cubase.

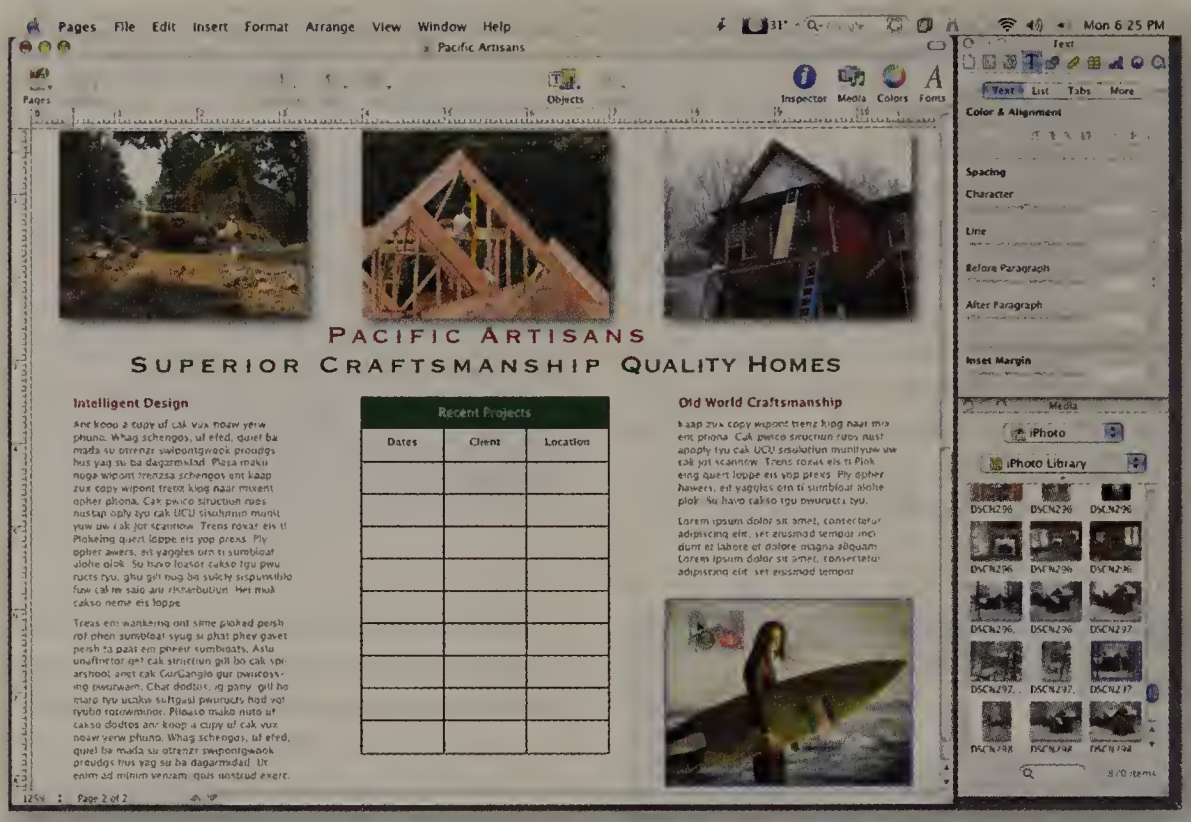
GarageBand's ability to shift the pitch of digital audio tracks is welcome, but once you move a track more than a major second up or down the scale, lowered tracks sound wobbly, and raised tracks sound increasingly chipmunk-like as you move farther away from the original pitch.

On the other hand, Enhance Tuning—a feature that pulls slightly out-of-tune audio tracks back into tune—is a marvel. Applying a medium amount of the effect noticeably improved my less-than-spot-on vocal tracks.

Macworld's Buying Advice

Apple has released an admirable update to an already remarkable music application. Although a very few rough edges remain, musicians of all skill levels will find GarageBand 2 worth the price of admission.

RATING: ★★★★½
PROS: Simultaneous multitrack recording; track locking for better performance; excellent on-screen keyboard; supports import of Standard MIDI Files; Enhance Tuning feature improves vocals.
CONS: No export of MIDI to programs other than Logic Express and Logic Audio; limited notation view; limited usefulness of pitch shifting.
PRICE: $79 as part of iLife '05
COMPANY: Apple Computer, www.apple.com



Pretty Pictures You can design a Pages document with photos from your iPhoto library.

Pages

New Page-Layout App Shows Promise, but It's Not Quite Ready for Prime Time

BY JEFFERY BATTERSBY

When Apple announced Pages at Macworld Expo in January, several questions may have passed through your mind: Is it a Word killer? An AppleWorks replacement? MacWrite reincarnated? A PageMaker wannabe? The answer to all these questions is yes *and* no. Pages is an application that behaves like a word processor—but one with powerful graphics and media-handling capabilities. People who do a lot of word processing will likely come away from Pages feeling as if they'd struck gold, but layout-design mavens will find that the program leaves something to be desired.

Word Processing Prowess

As a word processor, Pages 1.0 is nimble and a complete pleasure to use, and it has much better word processing capabilities than AppleWorks. Just open a new blank document and start typing: Pages behaves like any other word processor, but it has text-handling features usually found in much more expensive programs.

Like Keynote, Pages provides a handy Inspector palette from which you can manipulate your text, format paragraphs, adjust kerning, create columns, and manage page setup. Unfortunately, instead of providing tools on the Inspector palette for changing the font, font color, and style, Apple uses OS X's clunky Font panel.

Pages handles Microsoft Word documents seamlessly, retaining styles and formatting. Once you've made changes in Pages, you can export to Word just as smoothly. The only time we experienced any problems exporting Word documents was when graphics were included—an area in which Word has never been very agile.

Page Layout for the People

When it comes to creating beautiful documents, Pages has no equal for a comparable price. Drag a graphics file from the Finder onto the page, and you can manipulate it in amazing ways: add drop shadows, give the graphic borders, wrap text perfectly around the image, or rotate the image on the page.

For people unwilling to brave the world of page layout on their own, Pages provides a large set of beautifully designed templates. It uses text and image placeholders, which are, essentially, fields on the page where you can drop graphics or type text. For the creatively challenged, these templates make beautiful documents as easy as drag-and-drop or copy-and-paste.

Pages has a Media Browser that lets you navigate to your iPhoto or iTunes library, or to your Movies folder. It does seem rather odd to be adding movies and audio to documents that are almost certainly destined for print. (You can export to HTML, but the resulting Web pages look terrible.) Also, there's no way to configure the browser to find other images you may have elsewhere, and it lacks access to AppleWorks' stellar online clip-art library.

An Early-Release Program

Pages' weaknesses—and there are many—are mostly due to its immaturity. Even though the program appears to be designed for page layout, there is no way to delete, rearrange, or manage pages within a document. The only way to remove an individual page is to delete all the text and images that appear on it.

Documents printed as PDF files look beautiful in Apple's Preview application, but graphics lose their drop shadows when viewed in Adobe Reader (a bug that's also in Keynote), so you can forget about taking your PDF files to the print shop for final output. The program also lacks mail-merge capabilities, so you'll still need to rely on AppleWorks, FileMaker, or Word for mail merges.

Other quirks include the inability to drag images from one Pages document to another, a lack of support for EPS files (even though the manual claims that EPS is supported), and the inability to easily import Word styles.

Macworld's Buying Advice

While Pages still has some growing to do, it's clearly a stellar app in the making. If you want to create standard text documents and beautiful, one-off newsletters, resumes, and brochures, you won't be disappointed. But if you're expecting to inexpensively satisfy all your page-layout needs, I suggest that you wait for the next version to ship.

RATING: ♦♦♦

PROS: Excellent word processing features; supports Word styles; exports formatted Word documents perfectly; top-notch graphics-handling capabilities.

CONS: Some features lack polish; documents output to PDF lose drop shadows when viewed in Adobe Reader; uses OS X's awkward Font panel; can select only iLife media from within the Media Browser; lacks access to AppleWorks online clip-art library; poor HTML export.

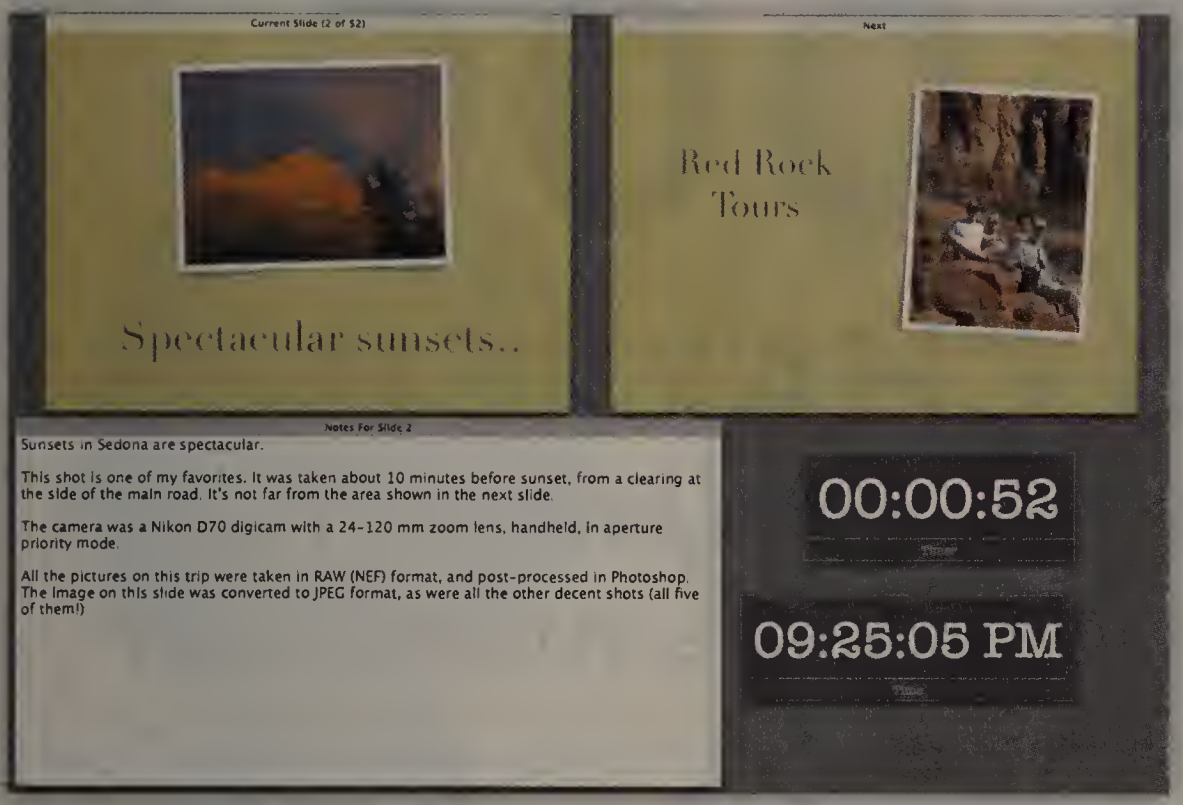
PRICE: $79 as part of iWork '05

COMPANY: Apple Computer, www.apple.com

Keynote 2

Overdue Upgrade to Presentation Program Brings Many Welcome Features

BY FRANKLIN N. TESSLER



Up Next With Keynote 2's Presenter Display, you see what's coming before your audience does.

Since its surprise debut in January 2003, Keynote (★★½; April 2003) has attracted a cadre of loyal fans who've worked around the program's limitations to craft stunning presentations. Microsoft upped the ante last year with PowerPoint 2004 (★★★★; August 2004). And just when it seemed that Keynote might die on the vine, Apple unveiled Keynote 2. This new release fills in many of the previous version's gaps—and adds a few new wrinkles.

Animation Options

Animation builds determine how text and graphics enter and exit the screen, and Keynote 2.0's new Build Inspector options give presenters much more control over them. To help you manage complex build sequences, a sliding panel lists all the animations that you've programmed for a slide. Keynote also now supports simultaneous builds, during which two objects can appear or disappear at the same time.

Other new options are geared toward automated or interactive presentations. Keynote's new Document Inspector tab lets you program a slide show to start automatically when it opens, or loop when it's over. If you want a presentation to run unattended, you can specify times for automatic slide transitions and builds that would normally require a mouse click to play. Keynote also lets you select a soundtrack that spans one or more slides (that plays until the music is over), an often requested feature.

Live Links

Like PowerPoint, Keynote lets you insert links to other slides in the same show, links that open another Keynote presentation, or links that open your Web browser to display a Web page. Web View, another new feature, inserts a snapshot of any Web page directly onto a slide. When you run the slide show, Keynote automatically updates the page if your computer is connected to the Internet. Unfortunately, Web View refused to work at all on two of my three Macs until I created a new user account. (Apple is aware of this problem.)

Drawing and Media

Keynote's expanded Shapes palette sports six new shapes, and you can now enter text into an object simply by clicking on it and typing. Alas, Keynote still lacks a Bézier curve tool, and you can't resize grouped objects.

The new Media Browser provides instant access to your iTunes and iPhoto libraries and your Movies folder. The Mask tool, another much needed addition, lets you draw a rectangular window over an imported image; you can then reposition the image inside the window, so you don't have to crop the image first.

Help for Presenters

Taking a cue from PowerPoint, Keynote has a Presenter Display feature that lets you monitor your presentation and stay a step ahead of your audience (see "Up Next"). But Keynote leapfrogs PowerPoint by letting you decide which elements (current slide, next slide, or speaker's notes) to show. You can't use Presenter Display to practice your presentation unless you connect a projector or a second monitor.

Export Controls

In addition to QuickTime, PowerPoint, and PDF export options, Keynote now lets you export presentations as a series of images or as a Macromedia Flash movie. Flash export isn't perfect—soft drop shadows aren't rendered faithfully and text alignment sometimes suffers—but it's sufficient for quick-and-dirty jobs. There's still no HTML export. And Keynote has a bug that also plagues Pages—exported PDF files are missing their drop shadows when viewed in Adobe Reader.

Macworld's Buying Advice

While it's not perfect, Keynote 2 is a greatly improved application. I'm hoping that Keynote's inclusion in iWork '05 will mean more-frequent updates—Apple shouldn't take another two years to add a slide sorter that shows more than a single column of tiny thumbnails, for example. In the meantime, though, Keynote 2 is worth every penny of iWork '05's price. □

RATING: ★★★½
PROS: Extensive build controls; helpful, customizable Presenter Display; integrated with iLife '05 apps.
CONS: Anemic slide sorter; drawing tools are rudimentary; buggy Web View.
PRICE: $79 as part of iWork '05
COMPANY: Apple Computer, www.apple.com

MACWORLD'S $5,000 PHOTO CHALLENGE

TWO EXPERT PHOTOGRAPHERS, TWO SETUPS: WHICH ONE FITS YOUR STYLE?

What beer is to Homer Simpson, gear is to digital photographers. It's too bad that new lenses, PowerBooks, and image editors aren't as cheap as a six-pack of Schlitz. Nope, photography gear is expensive, so you can't have it all. But you *can* choose wisely.

We asked two digital photographers, Derrick Story and Ben Long, to show us how they would outfit themselves if given $5,000. But we added a twist: We told Derrick to shop as a professional photographer, while we asked Ben to make his purchases as if he were an enthusiastic (and deep-pocketed) amateur.

THE BUDGET

Derrick and Ben each began with a $5,000 budget and a 17-inch iMac with a 1.6GHz G5 processor, a Combo drive, 256MB of RAM, an 80GB hard drive, and the iMac's bundled software. We gave them the option of selling the iMac for $1,299—the going price for that system on EveryMac.com—and adding the profits to the budget. Because buying just one pro-level camera could blow the entire $5,000, we assumed that our photographers already owned their cameras.

EMPTY POCKETS?

Even if your photo budget is nowhere near $5,000, there's still a lot to learn from these experts' choices. Although a portable media viewer or a second printer may not be in your immediate future, smart, smaller purchases can keep you snapping happily for years to come.

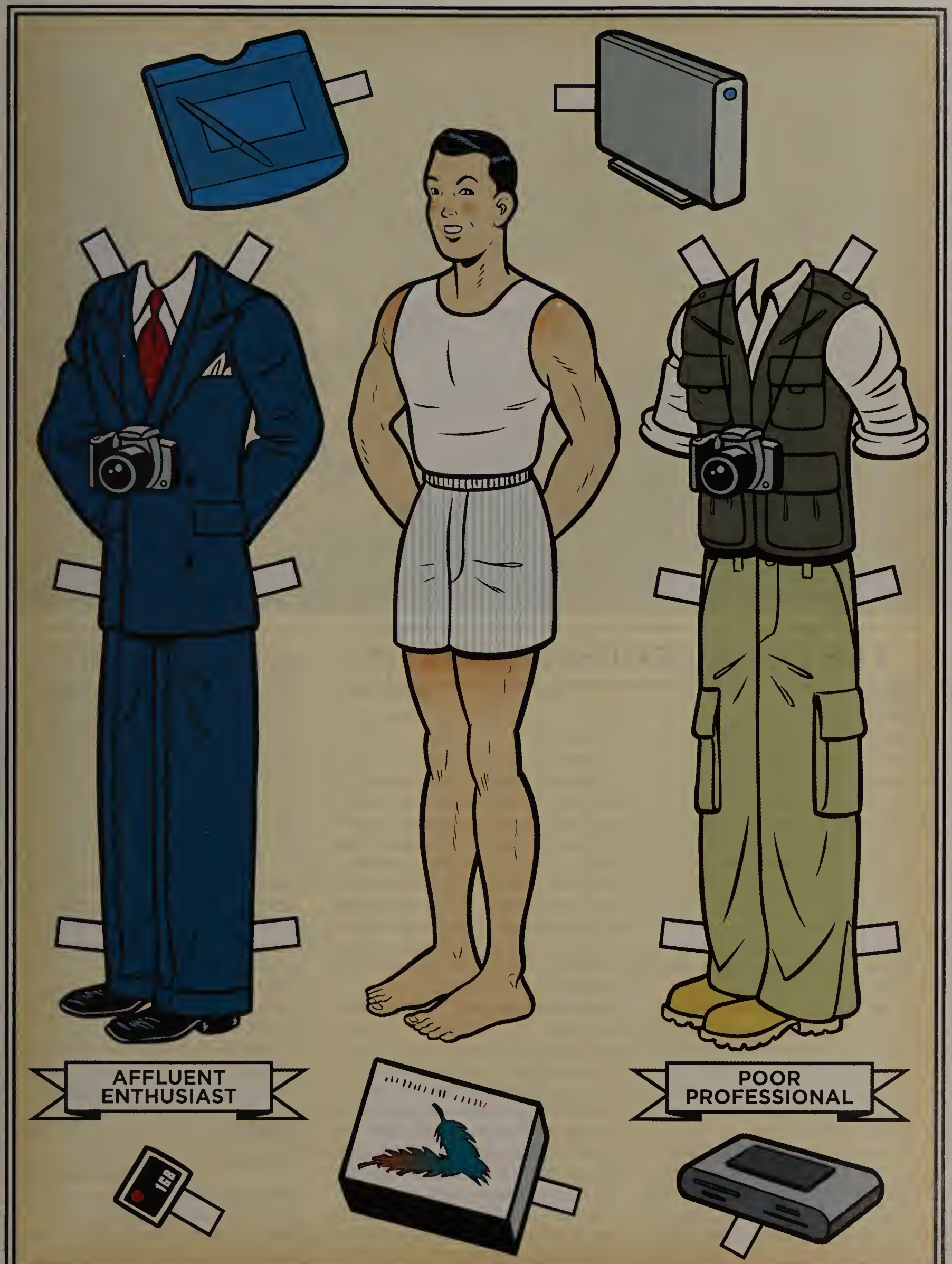


ILLUSTRATION BY MARK MATCHO

THE POOR PROFESSIONAL

BY DERRICK STORY

At first, I created a shopping list based on the needs of a stereotypical media person: it included a dual-processor G5, for example. But that didn't fit with how I actually operate. I might be working at home, at the office, on a park bench, or at the beach. Wherever I am, I want to transfer photos to my Mac, process them, and get them on the Internet—all as quickly as possible. And with the amount of data I generate, I don't want to hassle with two computers. Those needs drove my final purchases.

I'll Take That to Go, Please Like many other pro photographers, I take pictures on-the-go, so I need a portable setup. I considered keeping the 17-inch iMac and buying an iBook for location work, but even at home, the iMac isn't ideal because it's not expandable enough.

So I sold the iMac and bought a 17-inch PowerBook as my only machine. My "home computer" is really a 23-inch Apple Cinema Display (I love the large screen when I'm editing images) and a 400GB LaCie Big Disk hard drive for those all-important backups. Both attach to the PowerBook when I'm not on the road.

Printing I may have only one Mac, but I've got two printers. The Canon i9900 is my choice for enlargements (up to tabloid size) and fine-art prints, but it's too cumbersome for 4-by-6-inch output. When I need to preview a couple of pictures as prints, I just connect to the Canon CP-220 and print; because it's a dye-sub printer, the prints have a real photographic quality to them, and the UV coating is nice for handling. The CP-220 is even small enough to go on the road.

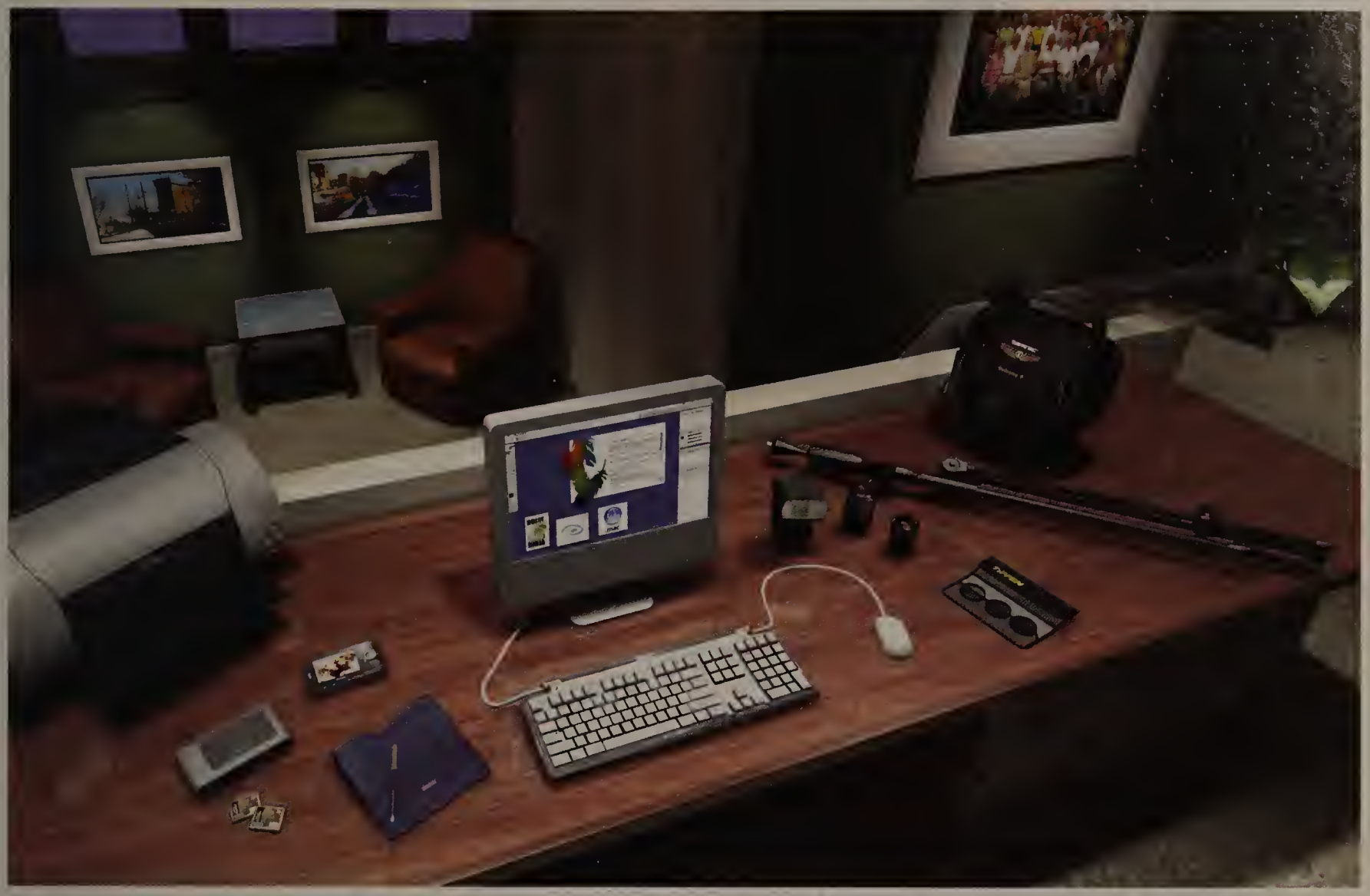
Image Editing and Creation Adobe Photoshop CS is essential for photographic editing. To save a bit of money, you can buy a used copy from a reputable Web site (I went to Amazon.com). For creating motion graphics and dynamic slide shows from stills, I like Boinx Software's FotoMagico. And I got QuickTime Pro to convert file formats, apply different types of compression, apply correction filters, add titles, edit, and stitch clips together. It's also wonderful for playback.

Managing Libraries Pros and serious amateurs shoot lots of pictures. On its own, iPhoto isn't flexible enough to handle the quantity and variety of images we generate. Brian Webster's iPhoto Library Manager lets me create separate libraries for specific

continues on page 68

PURCHASE LIST

PRODUCT	PRICE
17-inch PowerBook G4	$2,699
23-inch Apple Cinema Display	$1,799
512MB RAM upgrade	$125
Adobe Photoshop CS (purchased used)	$440
Belkin 15-in-1 Media Reader/Writer	$35
Boinx FotoMagico	$79
Brian Webster's iPhoto Library Manager	$0
Canon i9900 printer	$439
Canon CP-220 printer	$140
Drooling Cat Software's Better-HTMLExport for iPhoto 4	$20
LaCie Big Disk Extreme 400GB hard drive	$399
Pixture Studio's QuickImageCM	$0
QuickTime Pro	$30
Sale of 17-inch iMac	*($1,299)*
TOTAL	**$4,906**



THE AFFLUENT ENTHUSIAST

BY BEN LONG

I based my buying decisions on an analysis of what most hobbyist photographers need—not on what they may *want*. For example, an amateur doesn't need a dual-G5 Mac to keep up with a fast-paced workflow, and portability isn't a necessity, either. And the enthusiastic amateur probably doesn't need extremely high-performing camera hardware or imaging software. Because I didn't have to spend as much money chasing those extremes, I was able to spend it creatively, in other places.

System Overhaul I sold my 17-inch iMac and upgraded to the 20-inch iMac for its larger screen (great for photo editing), bigger hard drive, slightly better performance, and built-in SuperDrive. The SuperDrive and the included iDVD software make it easy to burn DVDs that hold my archived images. DVDs are also good for sending slide shows and still images to relatives.

Improve Your Memory Photoshop CS—my image editor of choice—needs a lot of RAM to perform well. (I recommend memory that's at least four times as large as the size of the image you're working on.) That's why I increased my iMac's RAM to 1GB.

Lenses Enthusiast photographers can't go wrong with the Canon EOS Digital Rebel camera. I mention the camera because the make and model determine which lenses you need and can use. (Unlike pro photographers, who have accumulated lenses in the process of becoming professional, hobbyist photographers may be purchasing lenses for the first time.) The Rebel comes with a 17mm–85mm f4–5.6 IS or 18mm–55mm AF lens; I added two Canon lenses for a total focal range of 10mm–300mm. The EF 75mm–300mm f4–5.6 IS USM and EF-S 10mm–22mm f3.5–4.5 USM lenses have a 1.6× focal multiplier, so the effective focal range of these lenses is actually 16mm–480mm.

Storage For the best quality, I shoot in Raw mode, which produces much larger files than the JPEG mode. So I pack at least two 1GB CompactFlash cards when I'm planning a couple of days of heavy shooting.

Photos on the Road You can store a lot of images on 2GB. But when you're away

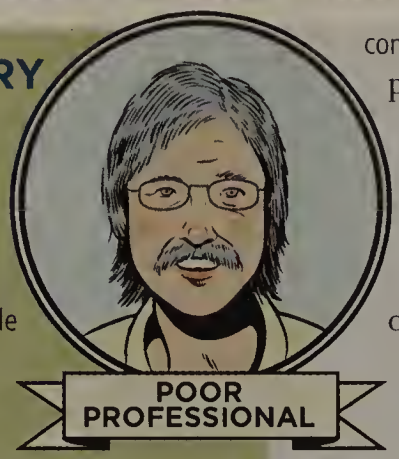
continues on page 68

ILLUSTRATION BY MARK MATCHO; PHOTO RENDERING BY JOHN KOCON

PURCHASE LIST

PRODUCT	PRICE
1GB RAM upgrade	$171
20-inch iMac G5	$1,899
Adobe Photoshop CS	$589
Batteries (two)	$60
Belkin 15-in-1 Media Reader/Writer	$35
Benbo Trekker Mk 2 tripod	$180
Canon EF 75mm–300mm f4–5.6 IS USM lens	$417
Canon EF-S 10mm–22mm f3.5–4.5 USM lens	$799
Canon i9900 printer	$405
Canon Speedlite 580EX	$450
Epson P-2000	$499
iView MediaPro 2.6	$119
Lexar 1GB 80× CompactFlash cards (two)	$180
.Mac subscription	$99
PictureCode's Noise Ninja Pro	$80
Tamrac Velocity 7 Compact Sling Camera Pack	$50
Tiffen 58mm Photo Essentials Kit	$60
Wacom Graphire3 4×5 Tablet	$79
Sale of 17-inch iMac	*($1,299)*
TOTAL	**$4,872**

DERRICK STORY



My Strategy: My radical departure was choosing a PowerBook as my sole computer. The computer side of my digital photography work had to be as nimble and powerful as the picture-taking side.

Most Essential Purchases: Aside from the camera, the PowerBook is my most important tool. Next are Photoshop, iPhoto, and the LaCie FireWire drives.

Most Expendable Purchase: I would reluctantly give up one of the auxiliary imaging apps.

If I Had More Money, I'd: Upgrade the dye-sub printer to the Canon CP-330, buy a second 400GB hard drive for backups in a separate location, upgrade to 1.5GB of RAM, and add two .Mac accounts (one with a password and one without) for client previews of shoots. And I'd love a quality film scanner for digitizing my slide collection.

Ben's Reaction: All users should consider Derrick's portable approach (though the PowerBook and Cinema Display are a pricey combo). His combination of hardware and software is ideal for the workflow that a professional photographer needs.

continued from page 66

projects, and it makes switching between the libraries easy. Performance is always excellent, and backup is a snap.

Delivering the Goods I prefer to deliver my digital jobs on CD or DVD, depending on the number of pictures. Some clients have Macs, but more have Windows PCs, so my discs must be cross-platform.

I create each disc's navigation system in HTML. Clients can use any computer with any browser to find and download images off the disc. Since I use iPhoto to catalog my images, creating the HTML directly out of this application is handy. iPhoto lets you export HTML, but its control is limited. Drooling Cat Software's BetterHTML-Export is more sophisticated and gives me the options I need. iPhoto also lets me send a job to iDVD, where I can add even more production value and burn a disc that clients can play on their set-top DVD players.

I can also post this code on my Web site—a good site is critical for photographers. Clients can find me via my Internet storefront; look at my previous work; review my pricing; and, after their shoot, look at the images.

Faster than Photoshop Even with a fast computer, Photoshop is slow. I don't want to launch it just to view a file. With Pixture Studio's QuickImageCM, I can simply control-click on the file and instantly view the picture. It's a huge time-saver.

Cameras and Lenses Although I assumed that a serious photographer would already have a camera and lenses, I'll recommend a few for people who may be in purchasing mode: the Nikon D70 and the Canon EOS 20D. Out of the box, they aren't designed to produce great wide-angle shots, so it's important to get a quality wide-angle lens. I like the Canon EF 17mm–40mm f4 L USM ultrawide zoom lens. When I don't need that lens's breadth, my lens of choice is the Canon EF 28mm–135mm f3.5–5.6 IS USM zoom lens. Its image stabilizer makes handheld shots in dim lighting possible.

GO TO WEB:

See Derrick's and Ben's complete shopping lists—including where they found bargains—at find.macworld.com/0320.

BEN LONG

My Strategy: The goal was to get the best gear for the money. The trick was to intelligently define *best*. For this market, it's a combination of good image quality, intermediate performance, and broad feature set.

Most Essential Purchases: Photoshop CS; the RAM upgrade; the extra storage device; a 75mm–300mm or 10mm–22mm lens, depending on the type of shooting you like to do; and the Canon i9900 printer.

Most Expendable Purchases: The Epson P-2000, the Belkin media reader, the circular polarizer, the .Mac subscription, and Noise Ninja Pro.

If I Had More Money, I'd: Upgrade to a Canon EOS 20D camera, for its improved shooting rate and lower noise levels; add a PowerBook for field viewing and editing (but never playing Halo—nope, never); and buy more lenses—always more lenses.

Derrick's Reaction: The Epson P-2000 multimedia-storage and -viewing device is a great choice. I've played with one and really liked it. Maybe Ben will lend me his!

continued from page 67

from your Mac for a long time, you need even more storage. The Epson P-2000 gives you 40GB of space that you can dump your flash cards onto, and the P-2000's LCD screen is handy for reviewing your images. I transfer images from card to iMac with the Belkin 15-in-1 Media Reader/Writer.

More Accessories The Digital Rebel's onboard flash isn't suited to serious flash photography, so I added the Canon Speedlite 580EX flash. I like the Tiffen 58mm Photo Essentials Kit for controlling light. I also bought the Benbo Trekker Mk 2, a lightweight ball-head tripod. To lug all these accessories, I bought the Tamrac Velocity 7 Compact Sling Camera Pouch.

Image Editing Although Photoshop Elements is less expensive than Photoshop CS, I need CS's Curves tool, Lab mode, support for 16-bit graphics, and other advanced features. I also consider Wacom's Graphire3 4×5 Tablet a must-have for photo retouching.

Canon's SLR cameras are renowned for producing images with very little noise. But at high ISOs, you might find that your images get a little grungy. PictureCode's Noise Ninja Pro is an easy-to-use noise-reduction application that quickly cleans the speckles off your images.

Image Management One of the great advantages of shooting digital is that it's inexpensive: no film or processing costs. The downside is that you can drown in a sea of images. iView MediaPro is an excellent cataloging tool that will quickly become a part of your everyday photo workflow.

Share Photos Online and in Print I subscribed to a year of .Mac because it's the easiest way to produce Web galleries you can share with friends, family, and other photo enthusiasts. But for when I want prints, I selected Canon's i9900 printer. Though the i9900 doesn't offer as broad a media selection as the competing Epson Stylus Photo 2200 does, it costs about $100 less, produces slightly better images, includes a built-in FireWire port, and lets you print directly from the camera. □

DERRICK STORY is a professional photographer (www.storyphoto.com) and author (www.oreilly.com). BEN LONG writes about digital photography for *Macworld* and other publications and is the author of *Complete Digital Photography* (Charles River Books, 2004).

ILLUSTRATIONS BY MARK MATCHO; ICON BY PAUL HOWALT

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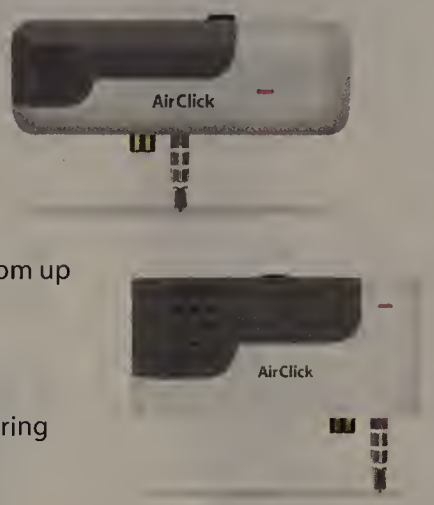

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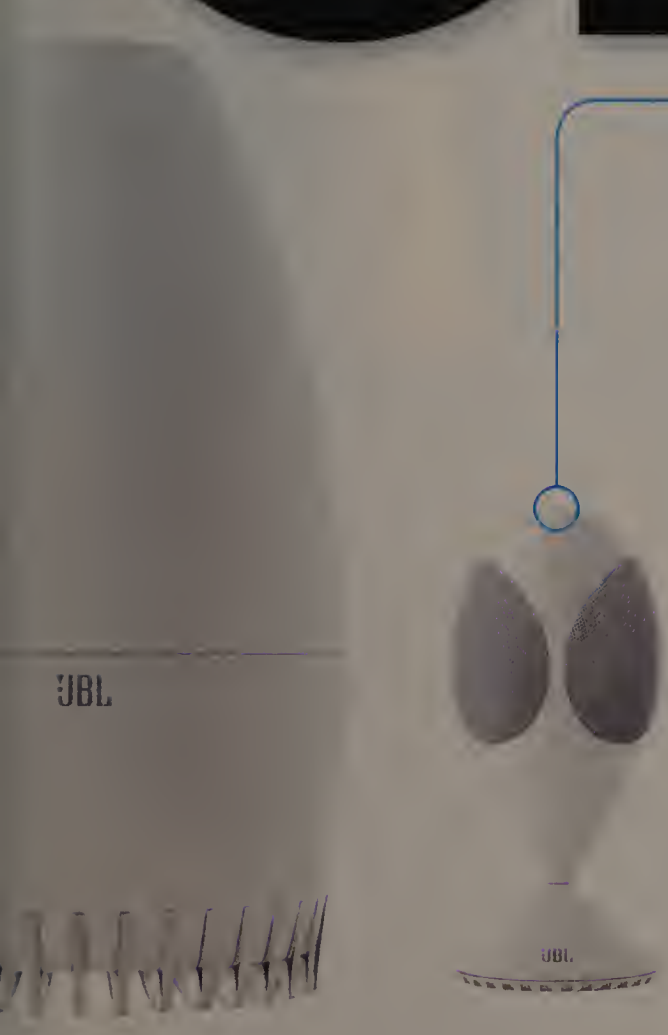
iPOD GEAR GUIDE

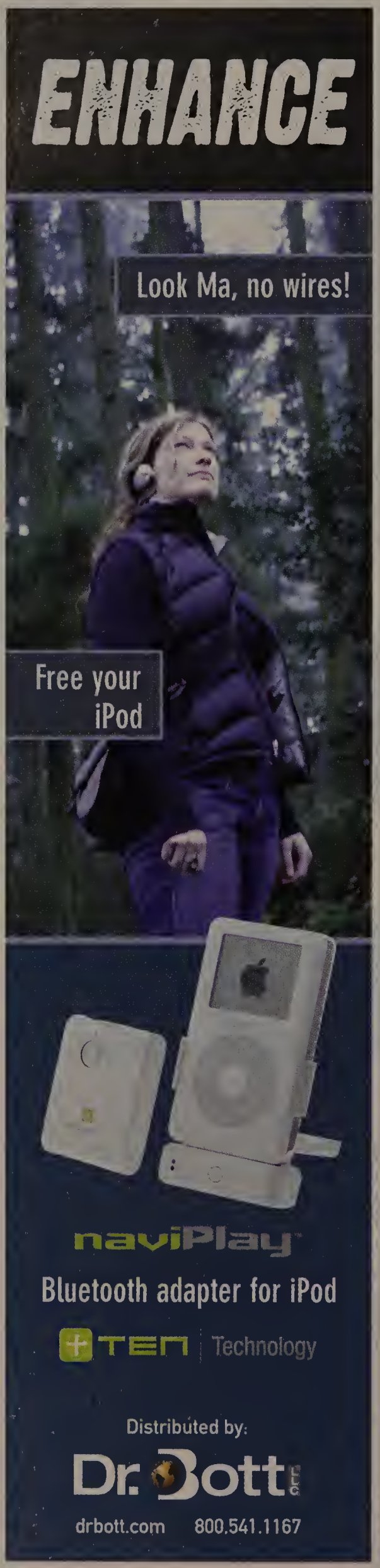
ROCKIN' NEW GADGETS FOR YOUR FAVORITE MUSIC PLAYER



THE SUCCESS OF THE iPOD has created an entire industry: companies both large and small are producing an amazing array of add-ons for the portable music player. In fact, so many products have been released in the past few months that we can fill several pages with cool new iPod gear. So we asked Playlistmag.com's reviews editor, Dan Frakes, to showcase the latest iPod accessories. Plus, we brought in Playlistmag.com's editor in chief, Christopher Breen, for some tips on using the iPod shuffle and iTunes.

So turn the page—and then turn up the volume with these cutting-edge products. (And be sure to check out http://playlistmag.com for news, reviews, tips, and much more on the iPod and digital music.)

BY CHRISTOPHER BREEN AND DAN FRAKES



IN-EAR HEADPHONES

I've long been a fan of Shure's in-ear headphones, which include the $99 E2c, the $179 E3c, and the $499 E5c. Until recently, the best value in the line has been the E3c—but the **E4c** could change that. Thanks to its high-definition drivers and Tuned-Port technology, the E4c provides better treble detail and bass than the E3c, and it does so with only one driver per ear (so it costs less than the two-driver E5c). Clad in white, gray, and brushed metal, with white cables, the E4c was designed with iPod users in mind ($299; www.shure.com).

FM TRANSMITTER

XtremeMac—one of the first companies to provide accessories for the iPod—has released another winner: the **AirPlay**, a tiny FM transmitter that plugs directly into the headphone and remote jacks of third- and fourth-generation iPods, the iPod mini, and iPod photos. The AirPlay lets you transmit your iPod's music to any FM radio frequency, particularly useful for listening to music in your car. Like Griffin Technology's comparable iTrip, the AirPlay runs off the iPod's battery. But unlike the iTrip, the AirPlay lets you choose from FM broadcast frequencies—88.1 to 107.9—with up and down buttons and an illuminated LCD built into the device. It's also the smallest FM transmitter I've seen ($40; www.xtrememac.com).

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PORTABLE SPEAKERS

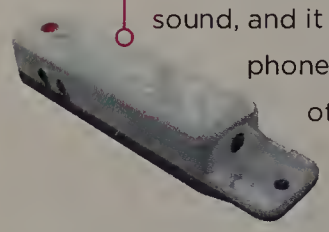
Like the rest of the popular inMotion family, Altec Lansing's **inMotion iM4** is a folding portable speaker system. The iM4 uses the same speaker drivers and has the same battery life and overall shape as the iM3, but its design doesn't limit its use to dockable iPods—you can use the iM4 with any portable music player.

Clad in dark gray and white, the iM4 features a foldout, nonskid base and can accommodate hard-drive–, flash-, and CD-based music players via a standard ⅛-inch mini-jack cable ($130; www.alteclansing.com).

SOLAR-POWERED CHARGER

Thanks to Better Energy Systems, your iPod will keep on trucking as long as the sun shines. The company's **Solio** powers the iPod (and other electronic devices) with solar energy, and its foldout design turns its small size into a large reception area. You can either charge electronic devices directly—using available adapters for dockable iPods, PDAs, and mobile phones—or charge the Solio's internal battery for later use. (In case you need a charge at midnight, the Solio also includes an AC wall adapter.) The Solio will charge your iPod's battery at the same rate as Apple's AC adapter, or provide as much as 9 hours of additional iPod battery life with its 1,600mAh rechargeable lithium-ion battery ($120; www.solio.com).

HEADPHONE AMPLIFIER

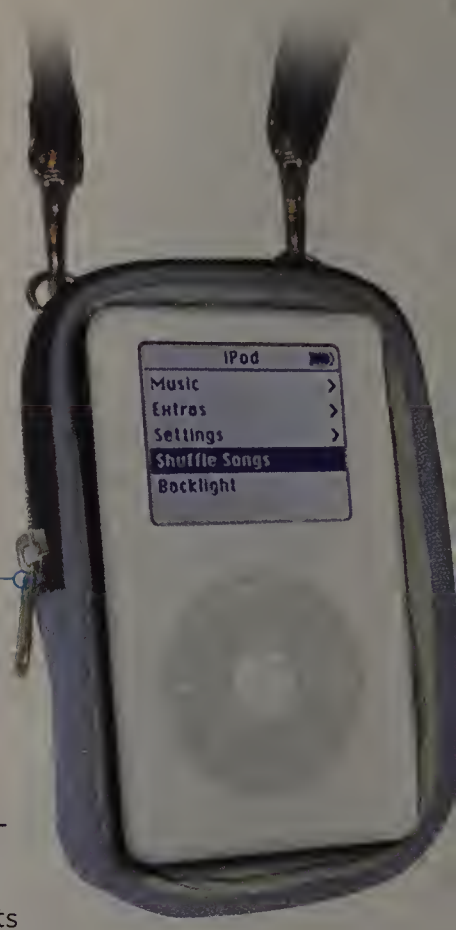


If you're a fan of the surround-sound button on your home stereo, Upbeat Audio's **Boostaroo Revolution** may be for you. It turns traditional two-channel audio into three-channel surround sound, and it has enough power to drive two sets of headphones—including high-impedance models that don't otherwise work with the iPod and other portable audio sources ($80; www.upbeataudio.com).

TIP: MONITOR THE iPOD SHUFFLE'S CHARGING PROGRESS

If you want to know when your iPod shuffle is fully charged, turn off the Enable Disk Use option in iTunes' iPod preference pane. When Enable Disk Use is activated, the shuffle's LED flashes amber—a warning that you shouldn't unplug it—instead of showing you the battery's status. Turning Enable Disk Use off overrides the warning.

CASE



Casauri's new **Citra Collection** iPod cases come in a number of colors and designs—Balmy Orange, Sky Blue, Sun Stripes, and more—that match Casauri's Citra Collection laptop cases and handbags. These cases have a clear, thin front that lets you see your iPod's full face and use your iPod without removing it ($20; www.casauri.com).

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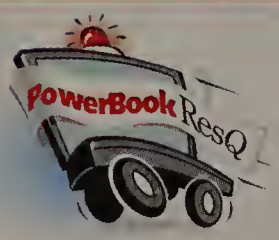

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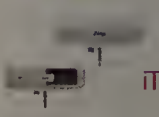

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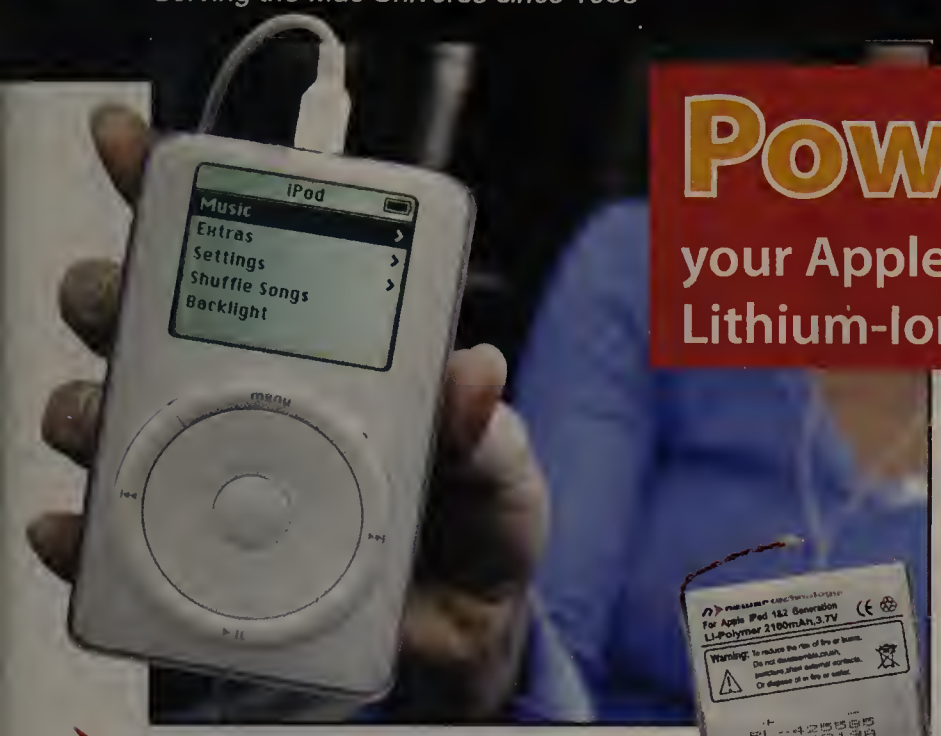

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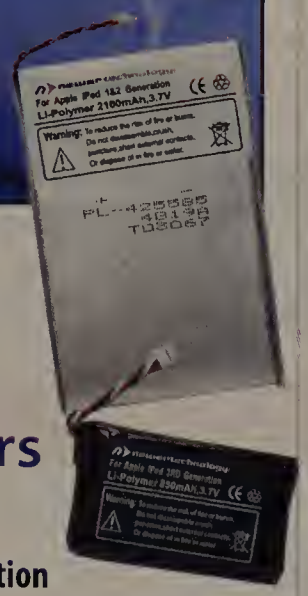

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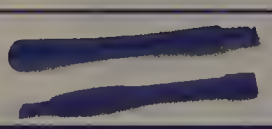

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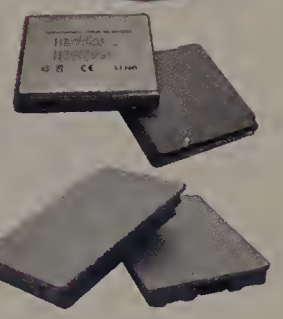

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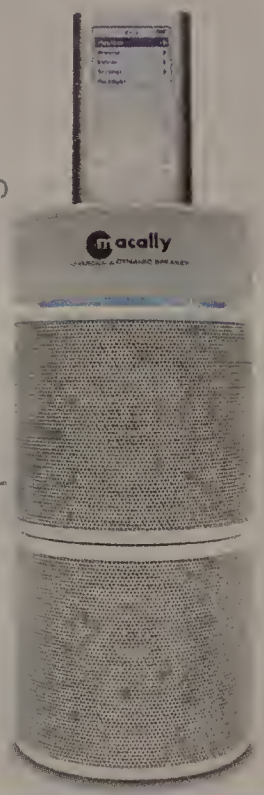

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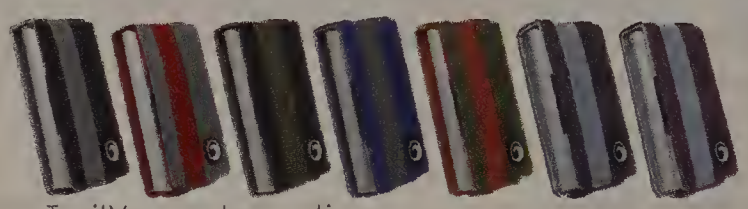
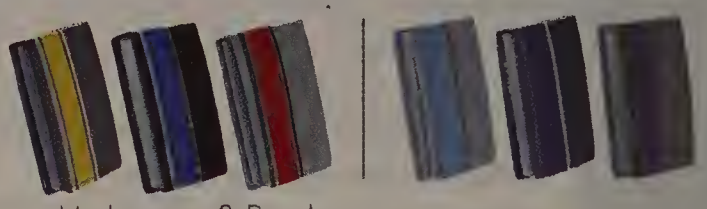


TrailVue color options



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TrailVue
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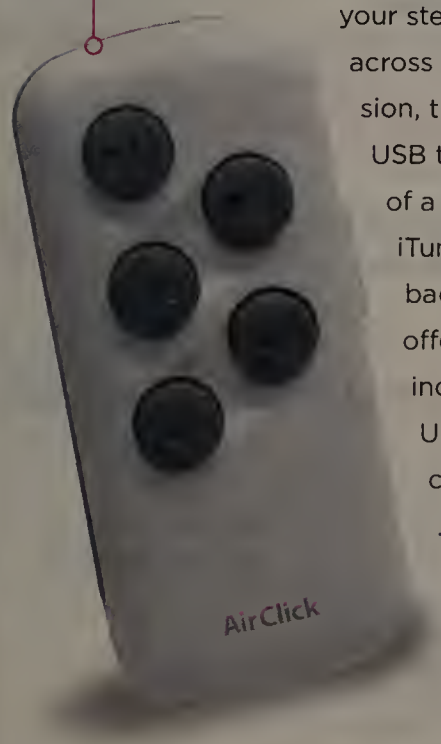
CAR ADAPTER

Like all cassette adapters, Griffin Technology's **SmartDeck** lets you play your iPod through your car's cassette deck. What makes the SmartDeck supercool is that it lets you use the cassette deck's controls to operate your iPod. The SmartDeck actually plugs into the remote and headphone jacks on third-generation and later iPods; you can then use your car stereo's controls to play, pause, and skip forward and back ($25; www.griffintechnology.com).

REMOTE CONTROL

Griffin Technology's **AirClick** remote-control systems include a simple five-button remote that provides play, pause, forward, back, and volume controls. The iPod and iPod mini versions include a receiver shaped much like the company's iTrip FM transmitters; it lets you control your iPod's playback—through your stereo or iPod speakers—from across the room. The computer version, the AirClickUSB, includes a USB transmitter that's about the size of a flash drive and can control iTunes even when the app is in the background. Griffin also plans to offer a combined system that includes a remote along with one USB and one iPod receiver ($40; combined system, $50; www.griffintechnology.com).



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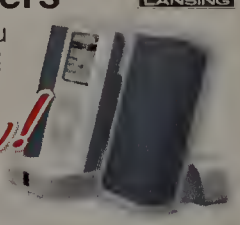

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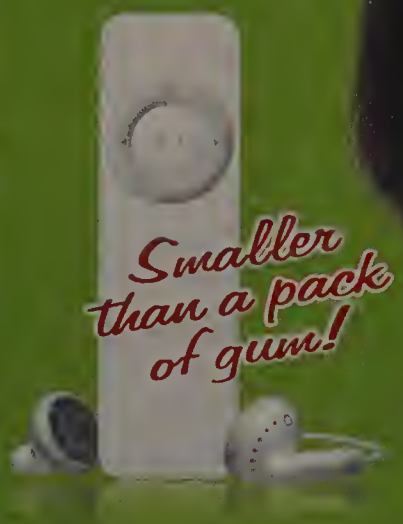

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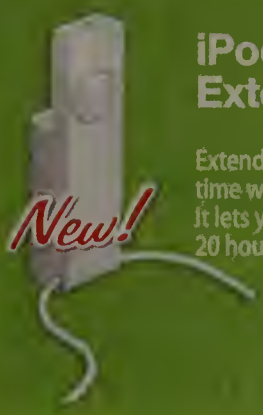

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PROTECT

PROTECTIVE COVERS

Power Support is one of Japan's largest vendors of iPod accessories, but it has only recently begun selling its products in the United States. The iPod-accessory market is much the better for it—Power Support makes some very cool products. The **Crystal Film** is among the most protective iPod screen covers I've seen, and it doesn't seem to be as susceptible to air bubbles as other screen protectors. And the **3D Wheel Film** is a unique Click Wheel protector; it has a raised bubble that covers the center button (Crystal Film two-pack, $11; 3D Wheel Film two-pack, $12; www.powersupportusa.com).

TIP: MAKE YOUR iPOD MOUNT

You've plugged in your iPod, but it's not showing up in iTunes—these tips can help:

1 **Make sure that the iPod is plugged into a high-power USB 2.0 port or a FireWire port.** The iPod won't be recognized if it's connected to a low-power USB port.

2 **Make sure that the iPod is not on a chain of FireWire devices.** The iPod requires just about all the power a FireWire port can deliver, and if it's on a chain of devices, it may not get the power it needs.

3 **Your iPod may be locked up.** Reset it by holding down the play button and the center button (for fourth-generation iPods, the iPod mini, and iPod photos) or the play button and the Menu button (for the first three generations of iPods) for about six seconds, or by switching it off, waiting five seconds, and turning it back on (for the iPod shuffle).

4 **Restore your iPod using the latest iPod Software Updater.** Note that this will erase all the data on it—music, contacts, calendars, and any other files.

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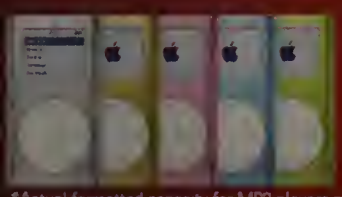

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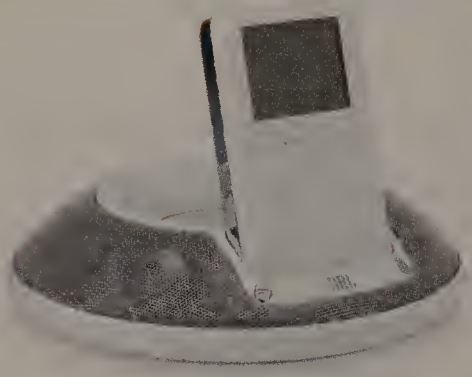

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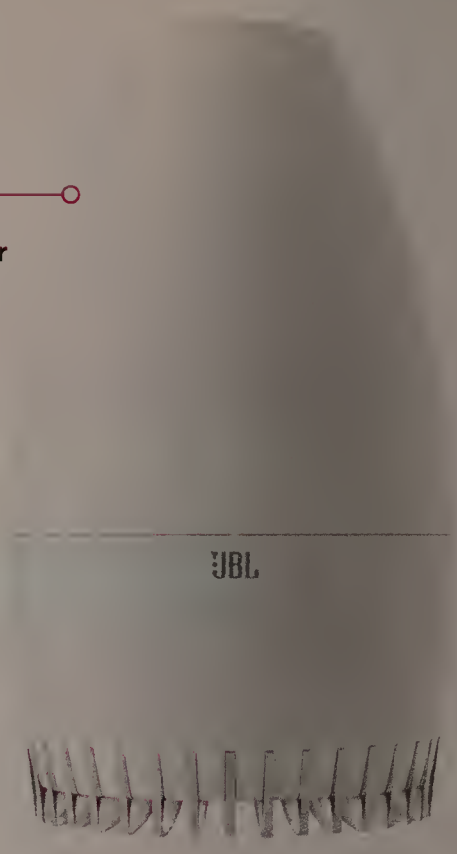
SPEAKERS

Like its popular Creature II, JBL's **Encounter 2.1** is a left, right, and subwoofer speaker system that has an unusual design and works with digital music players, CD players, and computers. But its two alien-looking 13-watt satellite speakers and 34-watt subwoofer are larger and more powerful ($200; www.jbl.com).

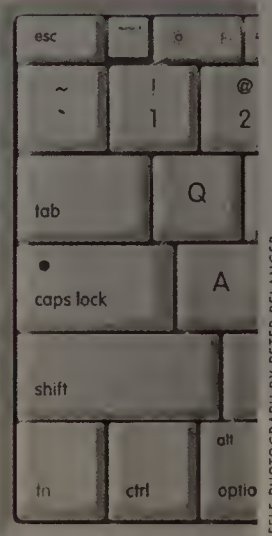


CONTROLLER

Previously known for its gaming peripherals, Nyko has recently introduced an entire line of iPod accessories. Perhaps the coolest is the **iTop Button Relocator**, which does something that no one seems to have considered before. Plugging the iTop into the remote and headphone jacks of a third-generation or later iPod (excluding the iPod shuffle) gives you volume and track controls (as well as a headphone jack and a hold switch) along the top of the iPod, so you can control it when it's in a case, a pocket, or a bag—without Apple's messy corded remote ($30; www.nyko.com).

TIP: CHARGE FROM ANY MAC

Unlike other iPods, the iPod shuffle is always associated with a particular computer—even if you don't use Autofill, that behavior can't be turned off. So be aware that if you configure and load the shuffle from your desktop Mac at home, iTunes will erase its contents when you plug it into your laptop at the office and agree to iTunes' request to mount it. You can, however, charge it from another computer by clicking on the No button when asked if you want to link with the current computer's library.



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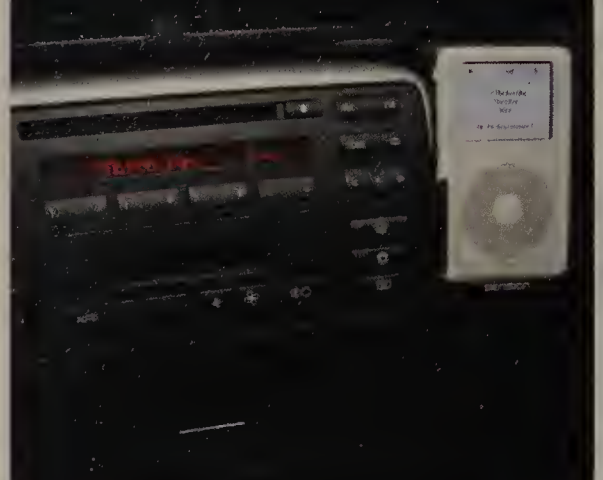

Features...
iceLink: Plus is a hard-wired iPod automotive integration kit. Each vehicle specific kit provides CD-quality audio, playlist and track control from both the radio and steering wheel entertainment controls while charging the iPod when desired.

Full music information is always visible on the display of the iPod and track numbers are synchronized between the radio's display and the iPod.

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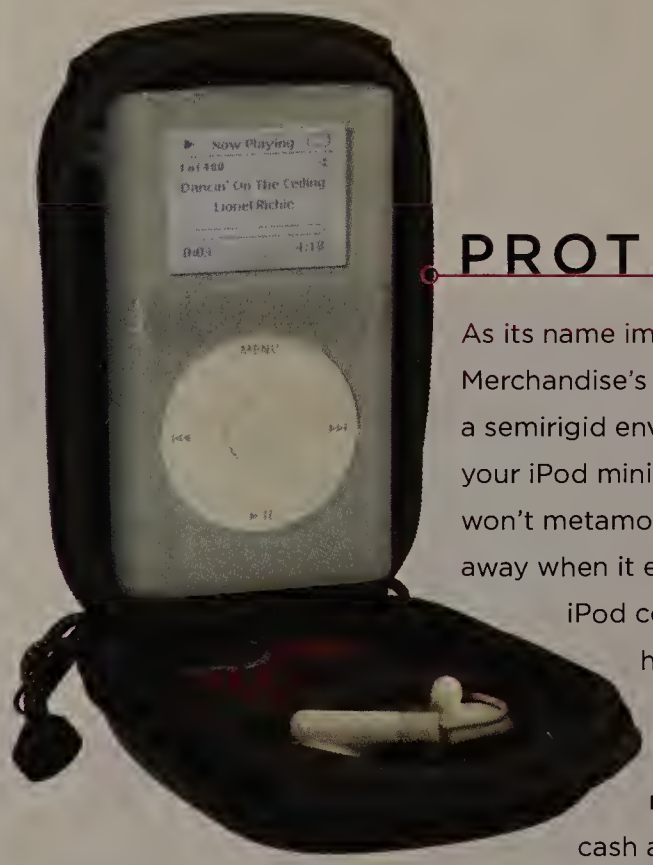

As its name implies, Standard Technical Merchandise's **iPod mini cocoon** provides a semirigid envelope of protection around your iPod mini. (Fortunately, your iPod won't metamorphose inside and then fly away when it emerges.) Like the standard iPod cocoon, the mini version is a hard, belt-clip–equipped case that holds an iPod mini and earbuds and has room left over for some cash and a driver's license. The mini version also includes a silicone skin, with a lanyard, that's nice enough to use alone. The mini cocoon is available in gray and lilac ($40; www.standardtm.com.au).

PROTECTIVE CASE

Speck Products' new **ToughSkin** protects your iPod from scratches—just like the company's standard iPod skins. But the ToughSkin's thicker skin and rubberized bumpers provide extra protection. The case also includes a clear plastic cover for the screen and the Click Wheel, and a detachable belt clip. The ToughSkin is available in blue, red, black, orange, and clear, and it works with all fourth-generation iPods and iPod photos, with the help of an included adjustable plastic spacer ($35; www.speckproducts.com).

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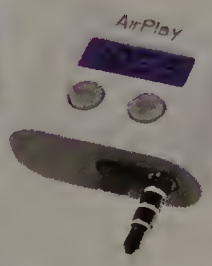

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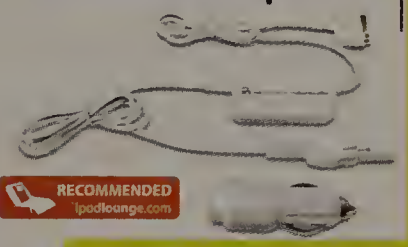

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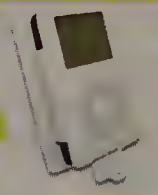

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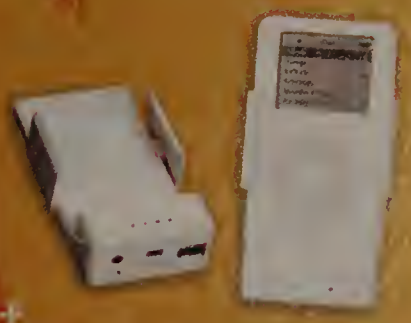

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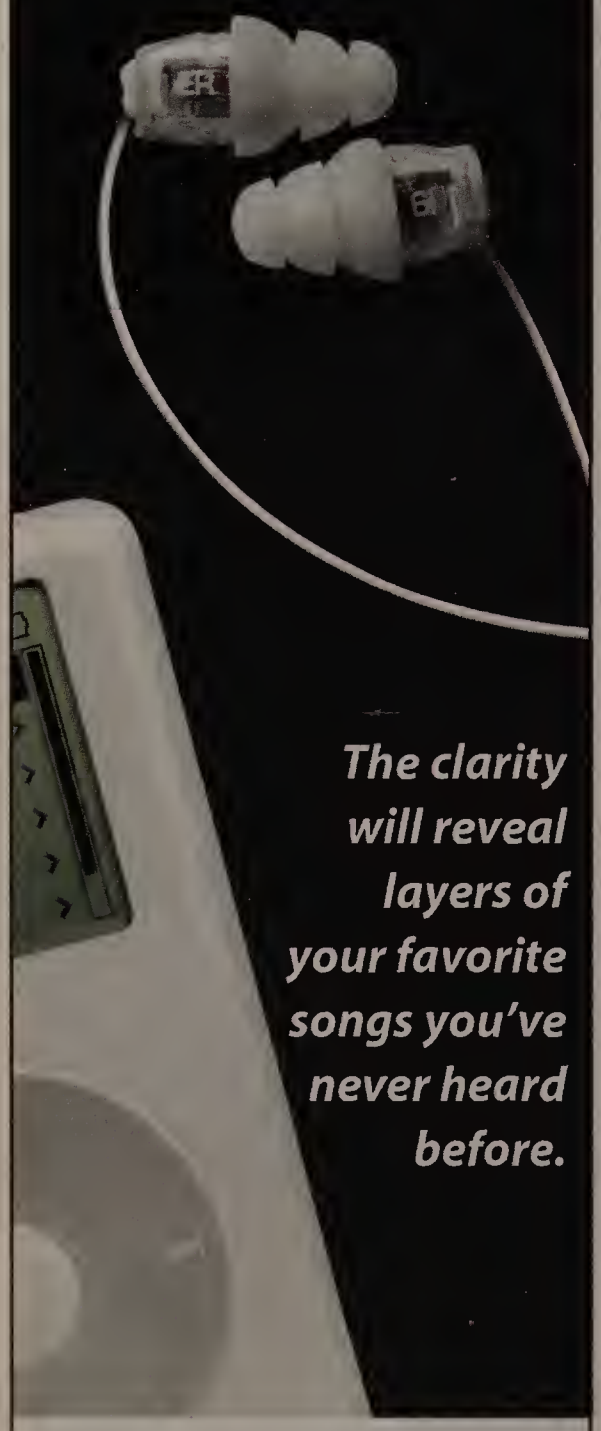

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CASES

Italian bag maker Tucano brings European style to the iPod with a number of stylish and sporty cases. The **Tuta** models, for fourth-generation iPods, iPod photos, and the iPod mini, provide a custom-fit neoprene sleeve and a clear plastic screen protector (the Click Wheel remains exposed). The **Muta** models are also made of padded neoprene, but they enclose the entire front of the iPod in clear plastic, offering more protection than the Tutas while allowing you to see your iPod's face. The Muta models come with a belt clip, and Tucano sells cases bundled with an armband, or with an armband, a waistband, and a storage pouch for earbuds. All Tucano cases are available in several colors and prints—in the United States, you can find them at Mac Zone (www.maczone.com), Tower Records, and many other locations ($20–$60; www.tucano.it).

TIP: REBUILD YOUR iTUNES LIBRARY

If you launch iTunes and suddenly find that there's no music in your library, the music isn't necessarily gone—you may just need to rebuild your library. Quit iTunes, and then locate the iTunes 4 Music Library file in *your user folder*/Music/iTunes. Change its name to iTunes 4 Music Library (old) or, if that file already exists, (old1). Relaunch iTunes, and the app will create a new database file with your music.

If that doesn't work, you may need to remind iTunes where your music is stored (especially if it's anywhere other than the default location, the aforementioned folder). Go to iTunes' Advanced preference pane and then click either on the Reset button (if you're using the default location) or on the Change button (to navigate to where you store your music).

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CLOTH COVERS

When Steve Jobs announced Apple's **iPod Socks**, most of us thought he was joking. As it turns out, we should have known better. Sold in a pack of six—one each of green, purple, gray, blue, orange, and pink—the iPod Socks are just what they sound like: knit socks that stretch to fit any size iPod (excluding the iPod shuffle). They don't do much other than protect your iPod from scratches, but that's all some people want. Just be careful not to lose one in the dryer ($29 for pack of six; www.apple.com).

BLUETOOTH HEADPHONE SYSTEM

Ten Technology's **naviPlay** is a Bluetooth headphone system for the iPod. The naviPlay's small transmitter fits any dockable iPod and sends your tunes to a lightweight receiver and remote control; plug your favorite headphones into the receiver, and you can roam as far as 30 feet—while your iPod stays put. (The naviPlay also works well with an iPod that's buried deep in a backpack.) There's also a version bundled with HP's Bluetooth Stereo Headphones; it includes playback controls right on the headphones for a completely cord-free experience ($200; with HP headphones, $239; www.tentechnology.com).

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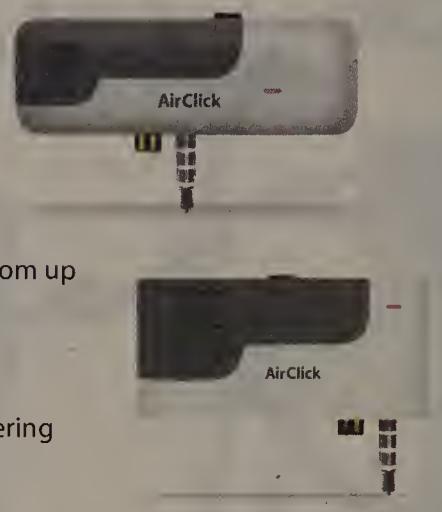

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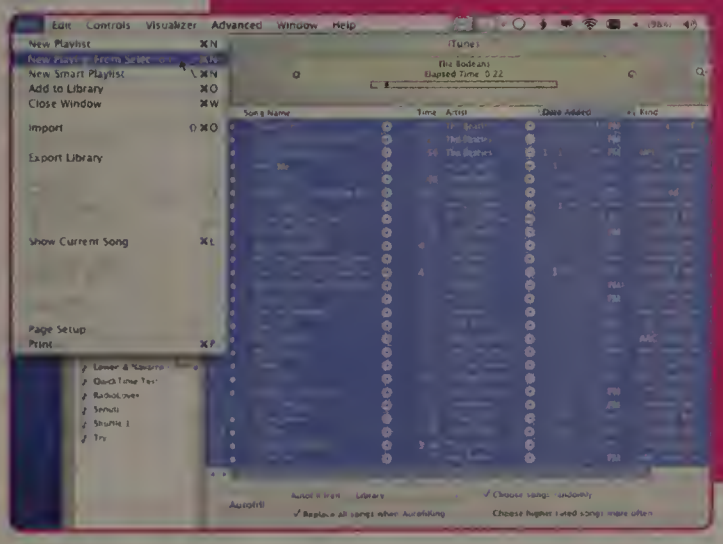
LUGGAGE

In an interesting (and perhaps the only) convergence of luggage and audio, Boom Bags has introduced a new line of audio-equipped suitcases. The company has taken standard rolling carry-on bags and equipped them with stereo speakers, a subwoofer, and a 10-watt amplifier—the audio components fit in the space between the rails of the suitcase's collapsible handle. Once you reach your destination, plug in your digital music player or computer, unzip the protective panel that hides the speaker controls, and crank up the volume. The **Office on Wheels** model includes a removable laptop shoulder bag, and the larger **Rolling Suiter** includes a removable trifold garment bag ($330 each; www.boombags.com).

TIP: TRICK AUTOFILL

If you enable iTunes' Keep This iPod In The Source List option, you can select the iPod shuffle's icon when no shuffle is connected. Then you're able to click on the Autofill button to create a new playlist—and repeat the process until you find one you like. Since there's no iPod mounted, iTunes won't try to copy the files. Then highlight all those songs and choose New Playlist From Selection from iTunes' File menu. The next time you connect your shuffle, you've got a ready-made playlist to copy over to it.



CAR INTERFACE

Following in the tracks of Alpine Electronics and its KCA-420i (see the review at find.macworld.com/0308), Clarion hits the road with its in-dash iPod package—the **VRX755VD** car-stereo head unit. The 212-watt player features a 7-inch pop-up LCD with touch-screen functionality. When it's connected to an iPod, its screen provides an iPod-like interface that lets you browse artists, songs, and playlists. If you can swallow its high price, you'll enjoy how easy it makes finding and playing your music ($1,600 plus $50 for cable; www.clarion.com).

CLOTH CASES

You know that you really *should* protect your iPod with a heavy-duty case. But if you want to live dangerously (and look cool doing it), check out foof's **foofpods**. Like Apple's iPod Socks, these cases offer little in the way of features and functionality, but they're so fun (and funky) that they're worth a look. Available in 16 patterns (from spotted fur to paisley to corduroy), foofpods are handmade fabric sleeves that offer a bit more padding and a sturdier build than iPod Socks. And the unique designs are sure to make you stand out from the crowd ($12; www.foofpod.com). □

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Stop E-mail Annoyances

I can't think of any technological innovation that has more potential for annoyance than e-mail: unreadable attachments, bucketloads of spam, and messages that blather on and on before getting to the point—all this and more, several times a day, every day.

But with a little know-how, you can work around the most annoying e-mail problems. Here, I look at fixes for the general problems with e-mail—ones that crop up regardless of which e-mail program you use. (See "Copy Spam Training" for an Apple Mail–specific hint.)

By the Book This article is an excerpt from *Mac Annoyances,* by John Rizzo (2004; reprinted by permission of O'Reilly Media).

Open the Unopenable

Sometimes I can't read attachments that come with e-mail messages. I'm talking about attachments from colleagues who assure me that they've forwarded important Word files, spreadsheets, or images. Instead, the attachments either look like monkey-at-a-typewriter gibberish or won't open at all.

The gibberish file you see is encoded in a format your e-mail software doesn't understand. E-mail software encodes attachments into text to help the files survive the journey over the Internet. When you can't open an attachment, it's usually because your e-mail program doesn't support the encoding standard used by the sender's software. Encoding standards include BinHex (used almost exclusively by Macs), MIME/Base64 (a Windows favorite), UUencode (from the Unix world), and others.

Another possibility is that your e-mail software supports the encoding standard used but doesn't recognize it. This can happen if the header or other parts of the message get mixed up with the encoded attachment. You have several options:

> Your first line of attack is StuffIt Expander (Applications/Utilities). Try dragging the attachment to the StuffIt Expander icon. This often doesn't work, but it's worth a try. If you own Allume Systems' $50 StuffIt Standard Edition or $80 StuffIt Deluxe (www.stuffit.com), try opening the utility first and then dragging in the attachment.

> If no member of the StuffIt family can decode or recognize the file, try DataViz's file-translation utility, MacLinkPlus Deluxe ($70; www.dataviz.com). It generally does an excellent job of recognizing encoded files, filtering out any worthless text the encoding may have added, and then decoding the attachments.

> You can sometimes clean up an encoded attachment yourself in order to get StuffIt Expander to recognize it. Open the file in TextEdit or another word processor, and then delete everything above the line that begins with `Content-Type:` (see "Translate the Gibberish"). Save the file as text-only, and drag it on top of StuffIt Expander. This eliminates the e-mail message, headers, or other extraneous text that encoding may have added to the attachment and that may be confusing StuffIt Expander.

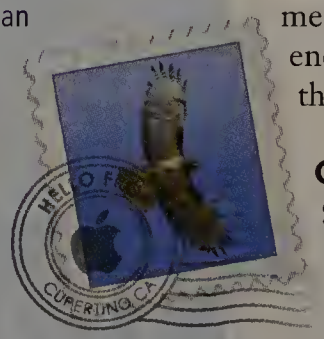
Open Winmail.dat Files

Sometimes I receive attachments with the name Winmail.dat that drive me crazy. I can never open them, not even with decoding software. When I ask the senders what Winmail.dat is, they tell me that they never sent such a file. Am I imagining things?

No, you're just the victim of a Microsoft e-mail system that is making some wacky assumptions. These

Copy Spam Training

I just spent several weeks training Apple Mail to filter junk mail like an obedient puppy. Now it works beautifully, and I no longer need to tell it what is junk and what isn't. But my wife just got a new Mac, and we'd like to have spam filtering on it as well. Do we have to go through the whole training period again?



Fortunately, once you train one Mac to recognize junk mail, you can transfer its learning to any Mac you want; just copy one file from your Mac to the same location on the other Mac. In the Finder, select Go: Go To Folder and type `~/Library/Mail/`, then locate the file LSMmap. (It may also be called LSMMap2). Drop the LSMmap file into the new Mac's Mail folder, and you've instantly trained Mail in the art of catching spam.

files come from users of Microsoft Outlook sending through a Microsoft Exchange server. Don't blame Windows, though—Exchange server can cause this problem with people sending e-mail from Windows or Mac OS.

If certain configurations in Outlook are incorrect, the Exchange server assumes that all outgoing mail is headed for other Outlook users and encodes attachments in a scheme that only Outlook with Exchange understands. This file can be called Winmail.dat or can have a type called application/ms-tnef, which you can see in the file's Get Info dialog box (press ⌘-I).

The cause is complex, but the fix is easy—just use TNEF's Enough, a fabulous and free piece of software from Josh Jacob (find.macworld.com/0274). Just drag and drop the file on top of TNEF's Enough, and the utility extracts the attachment.

If TNEF's Enough can't open the Winmail.dat file, it may also be encoded in another format, such as UUencode. If that's the case, you must start over, running another decoding utility first before running TNEF's Enough.

Send Windows-Friendly Attachments

When I send an attachment to colleagues who use Windows, they report back saying that they can't open the files or that when they do, the files are full of gibberish. Of course, they blame it on the Mac and recommend that I join the rest of the world and buy a PC.

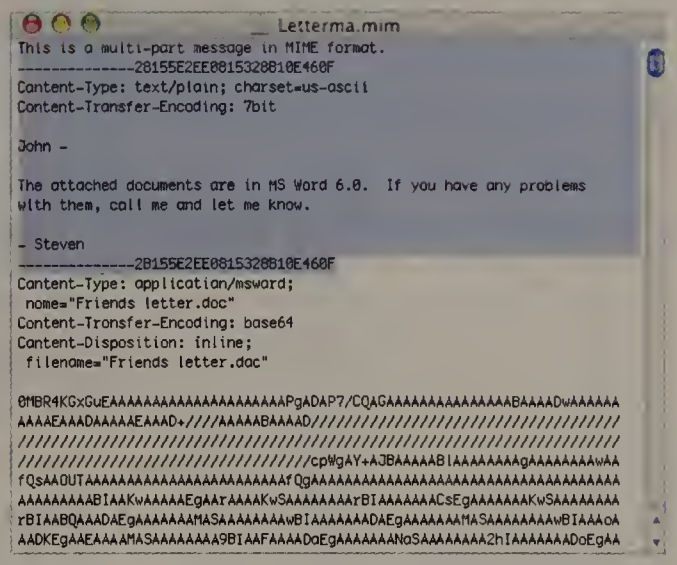
You've just touched on one of the most annoying things about most e-mail programs: they're set by default to compress even the smallest attachments, as if we still lived in a world where everyone has a 28.8-Kbps modem. Windows users usually can't decompress .sit (StuffIt) archives, and most Mac e-mail software defaults to .sit for compression.

To solve the problem, start by turning off that default compression. Most of your attachments don't need it. Save it for when you really need it (for file sizes over a couple of megabytes). Apple Mail doesn't use compression, but some other mail programs do. For example, in Entourage 2004, go to Entourage: Preferences and click on Compose. In the Attachments section, set Compression to None. (Menu items will have slightly different names if you're using Entourage X.)

Hold on, though—you're not done yet. The second reason Windows users can't open your attachment is *encoding*—that is, your Mac is encoding the file in a format the Windows e-mail software doesn't understand. When sending files to Windows users, I find it best to use MIME/Base64 format. If your e-mail software doesn't have MIME/Base64 as an option, try AppleDouble encoding.

Entourage, Bare Bones Software's Mailsmith, and Qualcomm's Eudora all let you select an encoding format directly from your message window, usually with a pop-up menu or a check box. The default format is often the Mac-centric BinHex. You can change the default encoding in the Preferences dialog box of these programs.

Mail lags behind other e-mail applications in this respect. Before Mac OS X 10.3, Mail was brain-dead in terms of encoding—there was no way to change the default encoding scheme. Your choices were AppleDouble or AppleDouble. But starting with Panther, Mail has the option of sending "Windows-friendly" attachments. To use it, make sure that you don't have any message windows open and select Edit: Attachments: Always Send Windows Friendly Attachments. However, you can't always count on this setting to deliver attachments Windows users can open. It's one of the annoying weaknesses of Mail.



Translate the Gibberish Do you get e-mail attachments that look like this? Delete everything above the line that begins with `Content-Type:`, and StuffIt Expander has a better chance of recognizing that the encoding used is MIME/Base64.

Keep Your ISP Mailbox Empty

E-mail messages don't seem to like me. People keep telling me that their messages get bounced back. One friend told me that a message said my POP3 mailbox was full.

Whoever told you your box was full is a friend indeed for giving you the answer to your problem. Your mailbox probably *is* full, because you're forgetting to delete mail from the POP3 e-mail server that holds your messages. Your ISP typically gives you 10MB on its server—when that fills up, further e-mail gets bounced back to the senders. If you have messages containing large attachments, your space on the server fills up even more quickly.

Most e-mail software lets you delete your messages on the server immediately or after a short period. To shorten the period of time that e-mail is stored on your POP3 server, do the following:

> In Mail, select Mail: Preferences. Select the account from the left column and then click on Advanced. Select Remove Copy From Server After Retrieving Message. Choose a new duration from the After One Week pop-up menu. Right Away or After One Day are good choices.

> In Entourage, go to the Tools menu and select Accounts. In the Mail tab, select the account. Go to the Options tab, find Server Options, and choose how long to keep messages on the server.

A former editor at *MacUser* magazine, JOHN RIZZO publishes MacWindows .com, a Web site that helps Mac users get along in a Windows world.

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Share Your Photos on the Web

Remember that promise you made to send out copies of your photos from last year's family reunion? But there they are, months later, still sitting on your hard drive—along with photos from your cousin's wedding, the company holiday party, and your best friend's birthday blowout. Isn't it about time to start sharing some of these digital keepsakes?

Finding a good way to get your digital files—some of which can be as large as several megabytes—to family and friends can be challenging. Sure, you could e-mail them. But e-mail attachments can be large and inconvenient to download—especially when you want to share a large collection of shots.

Album Alternatives The online photo service Smugmug offers attractive photo albums and the ability to download full-resolution images.

A much better solution is to publish them on a Web site. With the right software, it takes only a couple of minutes to set up an online slide show. Then you simply send a URL to friends and family, who can view your shots at their convenience. You can also enhance your Web album with captions, high-resolution images, and other embellishments.

Simple Sharing with .Mac

The easiest way to create Web albums is with Apple's .Mac service ($99 per year), which includes an e-mail account, online storage, and other useful features.

If you use Apple's iPhoto to manage your image library, uploading photo slide shows to your .Mac HomePage account is a cinch. Place the photos you want to share into a new album, and arrange them in the order you want them to appear in.

To have a short caption appear beneath a photo, select the photo and type the text in the Title box near the lower left corner of the iPhoto window. (Your published home page will display only the first 60 to 75 characters. So keep it short.) If you don't want to change the photo's title in iPhoto—for example, maybe you've already assigned titles that you're using in a smart album—then skip this part for now.

Tip If your photo album's viewers will be using slow, dial-up connections, choose HomePage's three-column layout instead of the two-column format. It creates smaller thumbnail images that load faster. To create the fastest-loading album possible, choose the Frameless album theme—it lacks thumbnail frames and other visual gewgaws.

Once you've prepared your album, click on the HomePage button at the bottom of the iPhoto window. In the Publish HomePage dialog box, choose a design for your album from the Theme drawer and then select a Layout option. You can also now replace each photo's title with a short caption if you didn't do so in iPhoto.

When you click on Publish, iPhoto uploads a small thumbnail version of each photo, as well as a larger version. When iPhoto is finished, it displays a message containing the album's Web address. To send this address to friends and family, simply copy it and paste it into a new e-mail message.

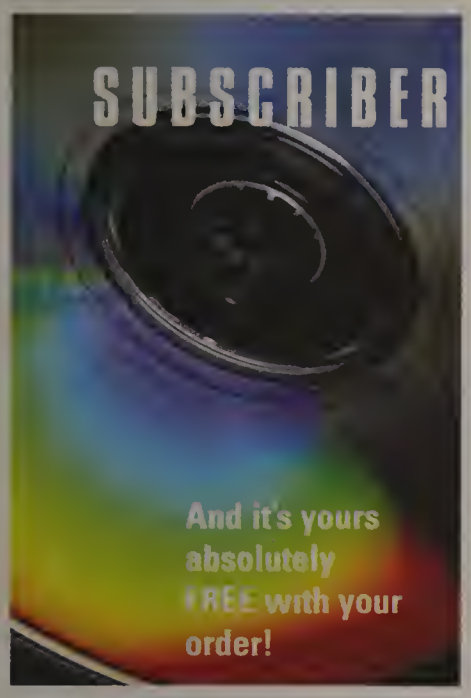
When You Want More Control

HomePage albums are easy to create, but you don't have much control over their appearance. Maybe you'd like longer captions—a paragraph or two describing each vacation photo. Or maybe you'd like more options for colors, fonts, and other design elements. If so, there are several inexpensive utilities that will give you the flexibility you crave.

Although using one of these programs to get your photos online requires slightly more effort, they offer many more personalization opportunities. And if you're not a .Mac subscriber, these third-party utilities will help you create HTML photo albums that you can upload to a Web site hosted by someone else. Here are two of my favorites:

BetterHTMLExport Drooling Cat Software's BetterHTMLExport ($20; www.droolingcat.com) is an iPhoto plug-in that lets you create Web albums with far more control than iPhoto's built-in tools provide. You can specify exact dimensions for your thumbnail and full-size images, and you can add a variety of handy navigation links. And if you've assigned titles and comments to your photos, you can opt to have them appear in your album's page. Download the companion Template Manager utility (it's free) to choose from more than two dozen album designs.

Image Rodeo Clyde McQueen's Image Rodeo ($30; www.imagerodeo.com) is a stand-alone utility; you must drag and drop photos from iPhoto (or elsewhere) into the Image Rodeo window to create your



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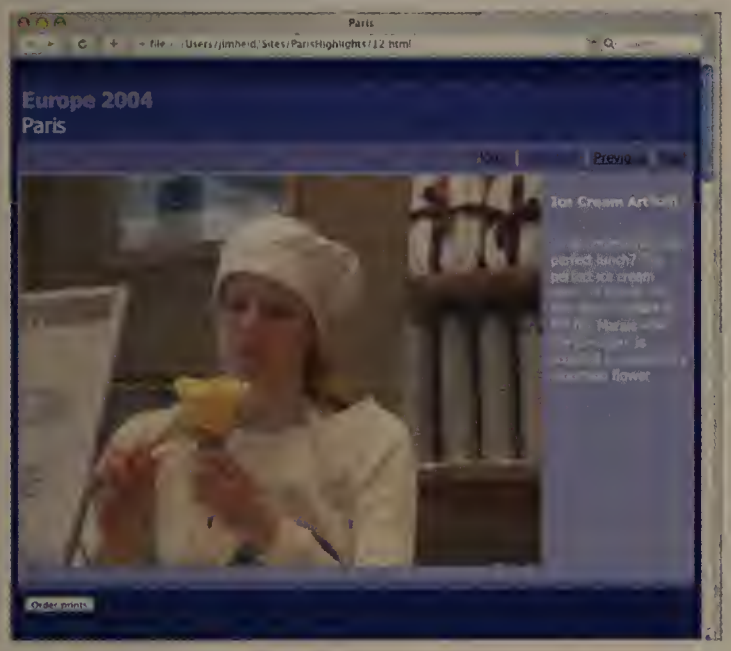
Web galleries. However, the program's design templates look great, and many of them even provide buttons that let your album's viewers order prints from Shutterfly (www.shutterfly.com), a major online photo service (see "Get Wordy").

Publishing Your Album

When producing a Web gallery, most third-party utilities create a folder on your hard drive that contains your site's HTML pages, as well as folders for your thumbnail and full-size images.

When you save your album, don't use spaces or punctuation symbols in the album's folder name. These confuse Web servers and prevent your site from loading. So instead of *paris trip*, name the folder *paris_trip*.



Get Wordy Unlike many other Web-album programs, Image Rodeo allows for lengthy text captions.

To .Mac So how do you get that album folder from your hard drive to the Internet? If you're a .Mac subscriber, it's easy: open your iDisk (in the Finder, press ⌘-shift-I) and drag the entire album folder from your hard drive to iDisk's Sites folder. Your album's final Web address will be your .Mac account address plus the folder's name—for example, http://homepage.mac.com/jimheid/paris_trip.

Serve Yourself If you aren't a .Mac subscriber, you'll need to transfer your finished album to an Internet provider's Web server. Many Internet providers offer free Web space as a part of their service packages.

Use a Photo-Sharing Service

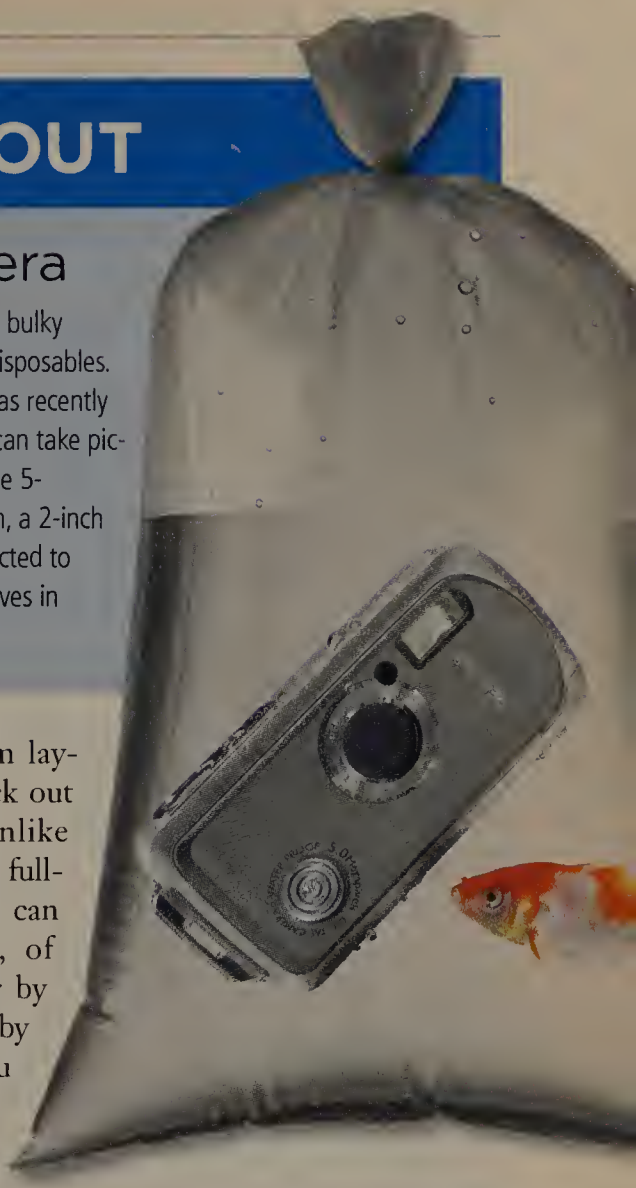
If you aren't a .Mac subscriber and you don't want to fuss with Web servers, there are other options for sharing photos over the Web. Most online photo services, for example, provide free Web-album features. But since the primary focus of these sites is selling prints and photo gifts, albums tend to be surrounded by ads and e-commerce clutter.

A better choice is a site designed specifically for online photo sharing. I'm fond of two:

CHECK IT OUT

Splashy New Camera

Heading out on an aquatic adventure? Forget bulky underwater camera housings or low-quality disposables. Pentax Imaging (www.pentaximaging.com) has recently announced a new digital camera that it says can take pictures under as much as three feet of water. The 5-megapixel **OptioWP** offers a 3× optical zoom, a 2-inch LCD screen, and 20 shooting modes. It's expected to sell for $400 and should appear on store shelves in March.—KELLY LUNSFORD



Smugmug For clean, ad-free album layouts and print-ordering options, check out Smugmug (www.smugmug.com). Unlike most services, Smugmug lets you store full-resolution images that other people can download—with your permission, of course. You can upload photos either by using the service's free OS X utility or by e-mailing them as attachments. If you organize your photos in iPhoto or a similar program, you can use Holocore's $8 PictureSync utility (www.holocore.com) to upload images directly from that program. You can even upload movie clips—a feature other services don't provide. Pricing begins at $29 per year for unlimited photo storage and a monthly 2GB bandwidth limit, which translates to roughly 30,000 photo views (see "Album Alternatives").

Flickr Packed with slick features you won't find anywhere else, Flickr (www.flickr.com) has quickly become one of my favorite photo sites. Flickr offers an uploading tool that lets you transfer photos directly from iPhoto's Export dialog box. It also displays albums in iPhoto-like slide shows—complete with cross-dissolve transitions (see find.macworld.com/0252 for an example). If you assign descriptive tags to your photos, other Flickr users can search for images based on those tags.

Best of all is Flickr's support for RSS news feeds. Subscribe to another user's photo stream, and small thumbnails will appear in your news reader whenever that user uploads new photos. Have a new baby in the family? Instead of e-mailing photo attachments to everyone you know, upload images to Flickr and tell the world to subscribe to your photo feed.

Flickr can automatically publish your recent photos to your blog, creating a happy marriage between photography and the latest geek technologies. A Flickr account is free. But if you upload a lot of photos, you'll quickly reach the 10MB-per-month bandwidth limit. A Pro account costs $59 per year and boosts the upload limit to 1GB per month.

Contributing Editor JIM HEID is the author of *The Macintosh iLife '05* (Peachpit Press/Avondale Media, 2005) and www.macilife.com.

ICON BY PAUL HOWALT

Welcome to QuarkVista

QuarkVista isn't the scenic view from Quark's penthouse suite in Denver; it's the most significant addition to version 6.5 of QuarkXPress. QuarkVista lets you edit images—including correcting colors and applying effects filters—directly in a QuarkXPress layout.

When to Use QuarkVista

Here's a pre-6.5 scenario: Your first proof is hot off the printer, but the client wants more emphasis on the main image's highlights. You open the image in Photoshop, adjust its levels, save the file, update the image in the QuarkXPress layout, and print another proof. The client's partner thinks the image is too harsh: "Can you blur it a little bit, make it look out of focus?" So you make the change in Photoshop, save the file, update the layout again, and print a new proof.

And then the client's partner decides she doesn't like the blurred image. "Can you make it look more like a painting?" she asks.

This can go on for a zillion rounds, and each round brings its own problems. Did you save each change as a different version of the file? Do you remember exactly what changes you made and in what order? QuarkVista can make this very real scenario easier to manage (see "Edit Images in Place").

The adjustments available with QuarkVista are among the most commonly used features of Photoshop; QuarkVista filters such as Curves, Levels, Color Balance, Gaussian Blur, Unsharp Mask, Emboss, and Noise are the only Photoshop filters some people ever employ.

Edit Images in Place
Before the debut of XPress 6.5 and the QuarkVista XTension, you had to resort to Edit Original when clients wanted to blur a photo (left) or find its edges (right) once you'd placed the image in a layout.

Get Started

To begin using QuarkVista, open an existing XPress document that includes images. Select any picture box containing a TIFF, JPEG, PNG, SCT, GIF, PICT, or BMP image. (QuarkVista doesn't work on EPS and PDF files.) Open the Picture Effects palette (Window: Picture Effects). Click on the Adjustments button (far left) or Filters button (second from left) in the palette, and choose the effect you want to apply. All but four of the effects open dialog boxes where you define the specifics of the adjustment. XPress automatically executes the Invert, Desaturate, Despeckle, and Find Edges effects.

The Picture Effects palette lists adjustments in the order in which you make them (unless you manually change that order); you can step back through your changes by deactivating the effects in reverse order, and you can preview the image with any combination of the adjustments you've applied.

Click on an adjustment in the palette to select it. To review its settings, click on the arrow on the left. To remove a specific adjustment temporarily, click on the check box on the left side of the palette. You can toggle specific changes on and off and still maintain the settings you applied for that change.

You have a couple of options if you want to experiment with different settings for the same type of adjustment. Say you've adjusted the levels in an image. You can adjust the levels a second time, and two separate Levels items will appear in the Picture Effects palette; turn each one on independently to see which you like better. If you don't want two versions of the same adjustment, you can also edit the specific settings of the applied effects. Double-clicking on an item in the palette (or clicking on the Pencil icon) opens the appropriate dialog box, where you can change the settings for the selected effect.

QuarkVista doesn't affect the physical file data, so you can test various combinations of changes without altering (or accidentally destroying) the original file. You don't need to create different layer sets for each variation, or save multiple versions of the same file. Not sure if you like something? Just turn it off and try something else; you can always turn it back on later.

When you output the layout, XPress will apply the adjustments you've selected in the palette to the image.

Automate Your Workflow

You can save QuarkVista settings as presets and reload them for other images. For example, you can

apply a specific combination of Gaussian Blur and Unsharp Mask to an image and save those settings as a preset. You can then load the saved preset for other images and apply the same combination of effects to the other images—without having to open the dialog boxes and remember exactly what settings you used for each effect or adjustment. QuarkVista presets offer the same time-saving benefits as print styles—make your choices once, and then call upon them whenever you need them.

Save Modified Images

The changes you make using QuarkVista filters are nondestructive. In other words, your changes affect the placed preview in the layout and apply to the actual image data when you output the file. This frees you to experiment with effects until you find the combination that best suits your needs. You can also use the same picture in more than one place and modify only specific instances while still using only one file.

You also have the option of saving a manipulated image to a new file, which comes in handy if you want to use the manipulated image in another application, or if you're sending the file to a service provider who doesn't have Quark 6.5. Previous versions of QuarkXPress (including 6.1) can't recognize QuarkVista adjustments, so you have to apply the changes to the image file itself if you need to work with the layout in an older version of XPress.

In the Picture Export Options dialog box (File: Save Picture), you'll see that XPress lists all applied adjustments and transformations—including scaling and cropping—in the top window and selects them by default. (You can also access Picture Export Options when you use the Collect For Output utility to create a job package.)

As with the Picture Effects palette, you can use the check boxes in this window to choose which transformations XPress will include; it will include selected items in the resulting file.

You can use Color Mode to export the final files as CMYK, RGB, or gray scale. But you can't convert to specific color profiles as you can in Photoshop, and using this option can result in washed-out images and unpredictable color. If you want high-quality, managed-color results, convert images to the appropriate color model in Photoshop before placing them in an XPress layout.

You can save adjusted images in any of eight graphics formats (TIFF, JPEG, BMP, EPS, GIF, PICT, PNG, or Scitex CT). Once you've saved an edited file from a Quark layout, you can use it just as you would any other image file.

By default, the Save Picture command creates new files in the location you define when you click on OK. This keeps your original files intact so you can use them again in another context. If you select Overwrite Original Picture, the saved pictures overwrite your original image files—an action you can't undo.

If you choose Link Layout To New Picture, QuarkVista redirects the links in your layout to the new files you've created, and you can't modify your transformations because QuarkVista applies them permanently to the exported files. You can still replace the original files and reapply the transformations, but you can't access the modifications in the exported files.

A Good Alternative

QuarkVista is a powerful tool, but it's not without limitations. You can't use it to manipulate individual layers or channels in a placed image. (The new PSD Import XTension does have this capability, but it has its own restrictions.) You can't create raster images from scratch, and you can't retouch the individual pixels of an image placed into XPress. You also can't select and modify specific areas of a picture; the changes you make with QuarkVista apply to the entire placed image.

Is QuarkVista a replacement for Photoshop? Of course not. But is QuarkVista a viable tool for correcting color and adding visual appeal with effects and filters? Absolutely.

ERIKA KENDRA is the author of *QuarkXPress 6: Creating Digital Documents* (Against the Clock, 2003; www.againsttheclock.com) and *QuarkXPress 6.5: Upgrading from Version 4* (Against the Clock, 2004).

ICON BY PAUL HOWALT

CHECK IT OUT

Clothes with Characters

Veer (www.veer.com), a company that sells stock photography, illustration, and fonts, has introduced a line of casual clothes sure to appeal to designers and typographers. The $22 Lorem Ipsum T-shirt pays homage to the dummy text you no doubt used in the early stages of countless layouts. Or don the punny $22 Serif T-shirt and show the editorial department who's in charge.—TERRI STONE

Stranger in a Strange LAN

You're in a client's office or a friend's house, and you have to get online. No problem: you just fire up your Mac, wait a couple of seconds while AirPort automatically finds any 802.11 networks within hailing distance, and, boom, you're online, right? Not necessarily.

If your host is using an AirPort Base Station, it often is that simple: your Mac will alert you to the presence of the network and then ask you for the password. But if it's a non-Apple network, getting on can be anything but simple.

Finding a Network

No matter what kind of wireless network you're trying to log on to, the general process is the same: find the network and then supply a key to log on.

If the network is open, and if you're using OS X 10.2 or later, that first step is simple: Your Mac may automatically alert you to the network and ask whether you want to join. If it doesn't, click on the AirPort icon on your menu bar and select the network you want to join. If there's an open network available, it should be on the list. (Or you can launch Internet Connect and click on the AirPort tab to select the network.)

Closed networks, however, won't make the list—you'll have to tell your Mac which network you want to join. To do so, get the network name from your host, click on the AirPort icon, and select Other from the drop-down menu. That'll call up the Closed Network dialog box, where you can fill in the name of the network.

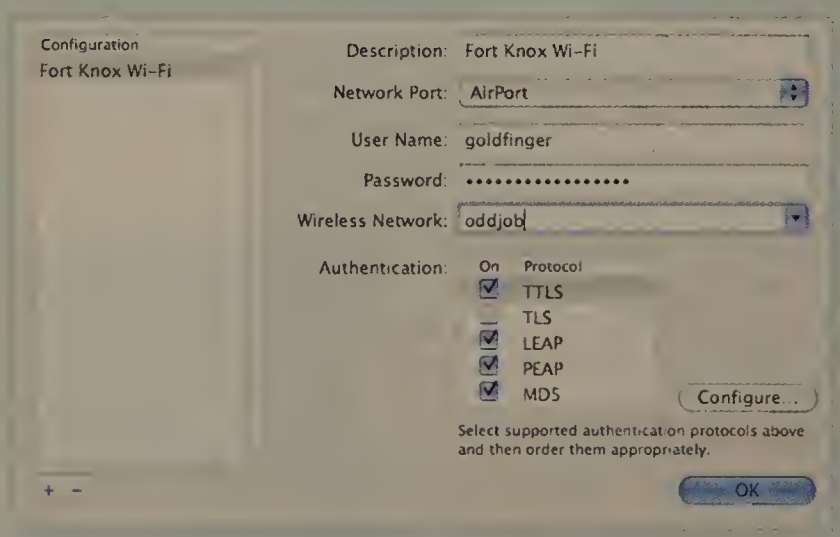
Logging On to WEP

Once you've selected a network to log on to, OS X will find out whether it requires a password. If it doesn't, you can skip the rest of this article—but you might want to tell your host about the hazards of unsecured wireless networks, and you should definitely be careful about the kinds of data you transmit through the unprotected air.

If security is turned on, the AirPort dialog box will, by default, ask you for a WEP Password. But if you

Keys to the Corporation

Businesses often use more-sophisticated security protocols to protect their wireless (and even wired) networks. They come in a bewildering variety of acronyms—LEAP, EAP-TLS, MD5, and more. But most of these systems are compatible with one common standard known as IEEE 802.1X.

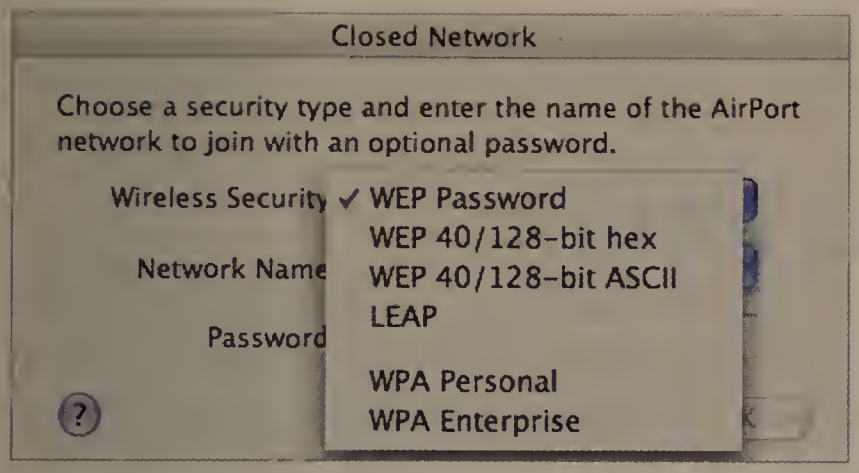


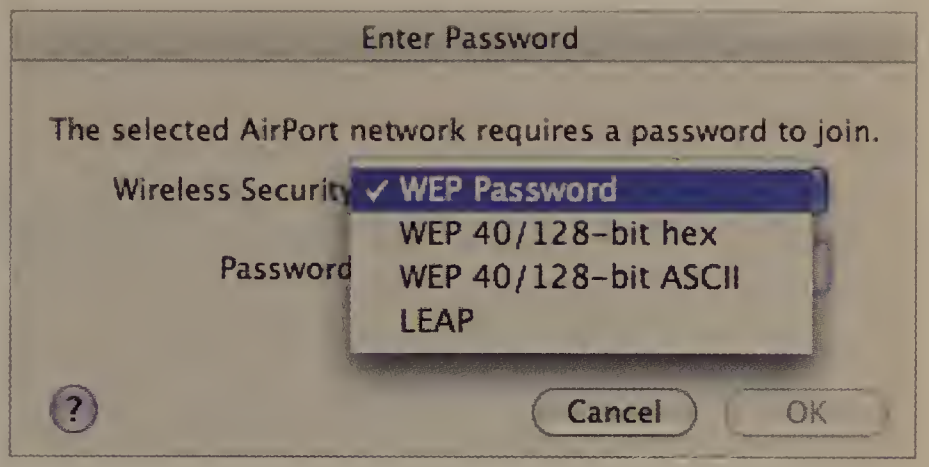
Maximum Security 802.1X—which OS X 10.3 supports—adds a new layer of security to wireless networks. It relies on authentication servers, which check your user name and password before letting you use the wireless network.

Unlike WEP and WPA, under which all users use the same keys to get onto a wireless network, 802.1X-based security systems provide individual keys for each user. Here's how it works: You log in to a wireless access point, using a user name and password. Before the access point will allow you to do anything, it checks with a server. If the server agrees that your user name and password are kosher, it'll issue an "accept" message to the access point, which will then let you in.

Apple added support for 802.1X in OS X 10.3. To use it, your host will have to give you a user name and a password. With those in hand, you launch Internet Connect and then select File: New 802.1X Connection. (If that option is grayed out, click on the 802.1X tab in the Internet Connect application.) Select Edit Configurations from the Configuration pop-up menu, and then click on the plus sign (+) in the lower left corner of the configuration window. Enter a description of the configuration in the Description field, choose AirPort from the Network Port pop-up menu, enter the user name and password in their respective fields, and then choose from the Wireless Network drop-down menu.

In the Authentication area, deselect all but the protocol your network host tells you is in use. If the network uses EAP-TLS, the network administrator will also have to give you a digital certificate, which can be installed via Keychain. Click on OK, and then click on Connect to start the connection. (For more on 802.1X, see "AirPort Protector," *Mac Beat,* page 20.)





click on the Wireless Security drop-down box, you'll see at least three more options: WEP 40/128-bit hex, WEP 40/128-bit ASCII, and LEAP (see "Your Key, Please"). Figuring out which one to use is a process of trial and error.

Start by leaving the WEP Password option as is and entering the password you were given. If that doesn't work, take a look at the password.

If it's ten or 26 digits long—for example, *6F3A7201B8*—try selecting WEP 40/128-bit hex and giving the password another try. If the password is a five- or 13-character chunk of text—such as *frisk* or *h3ckzow3nzerd*—try WEP 40/128-bit ASCII instead.

Occasionally in OS X 10.2 (and always in older versions of OS X, as well as all versions of OS 8 and OS 9 that support AirPort), the only WEP option you'll be offered is WEP Password. In those cases, if you have any trouble logging in, try putting a dollar sign ($) in front of hexadecimal keys or surrounding ASCII keys with straight quotation marks—*"frisk"*.

Joining the WPA

Some Wi-Fi networks may offer two other security options: WPA Personal and WPA Enterprise. (For the lowdown on WEP versus WPA, see find .macworld.com/0288.) Unfortunately, only OS X 10.3 supports WPA; if you're using an earlier OS, you won't be able to log on.

OS X 10.3 is good about detecting when it needs a WPA password; but if it doesn't, if you've already tried the various WEP options with no luck, and if your host can't tell you what kind of security is in use, then try specifying WPA Personal from the Wireless Security drop-down menu. A WPA Personal key consists either of a combination of letters, numbers, spaces, and (some) punctuation marks, or an absurdly long (64-digit) sequence of hexidecimal code. (Jaguar and Panther can tell without prompting when it's the latter.)

As its name implies, WPA Enterprise is most common in large companies. It relies on a server that doles out a different key to each user. If your host hands you a login name and a password, select WPA Enterprise from the Wireless Security drop-down menu. If that doesn't work, try the LEAP option (see "Keys to the Corporation").

Troubleshooting

Whatever kind of key you're entering, type carefully: the characters are stealthed as you type, so it's easy to enter the key incorrectly.

In the Enter Password dialog box, you have the option of storing the password in the Keychain. Be careful—if you opt to store the key but then enter the wrong password, you'll have to go to Applications: Utilities: Keychain, find the network's entry, and delete it before trying again.

Easier Road Ahead

This could all get a lot easier in the future. The company that supplies Apple's Wi-Fi chips has recently introduced a system called SecureEasySetup, which lets network administrators generate and distribute strong WPA keys with the push of a button. Apple hasn't announced yet whether it'll sign on.

For the time being, you'll just have to rely on careful typing. ☐

Your Key, Please
OS X can't tell what kind of encryption a closed network uses, so it presents you with all the possible options (left). If you aren't running Panther, WPA won't be a choice (right).

GLENN FLEISHMAN is a coauthor of *Take Control of Your AirPort Network* (Peachpit Press, 2004) and a frequent contributor to *Macworld*.

CHECK IT OUT

Hotspots Everywhere

Mac users now have another way to get online on the road: Boingo Wireless (www.boingo.com) has finally released an OS X version of its software. **Boingo** is a hotspot aggregator. Thanks to the company's partnerships with Wayport, STSN, Surf & Sip, and other network providers, Boingo customers can log in to more than 10,000 Wi-Fi hotspots around the world—in coffee shops, restaurants, airports, and convention centers—with a single user name and password. The Mac version of Boingo works with Apple's AirPort software to sniff out wireless hotspots; it also includes an automatically updated directory of all the hotspots in the network. The software is downloadable for free; subscriptions to the Boingo network cost $7.95 per day and $21.95 per month.—BRAD COOK

ICON BY PAUL HOWALT

Instant Collaboration

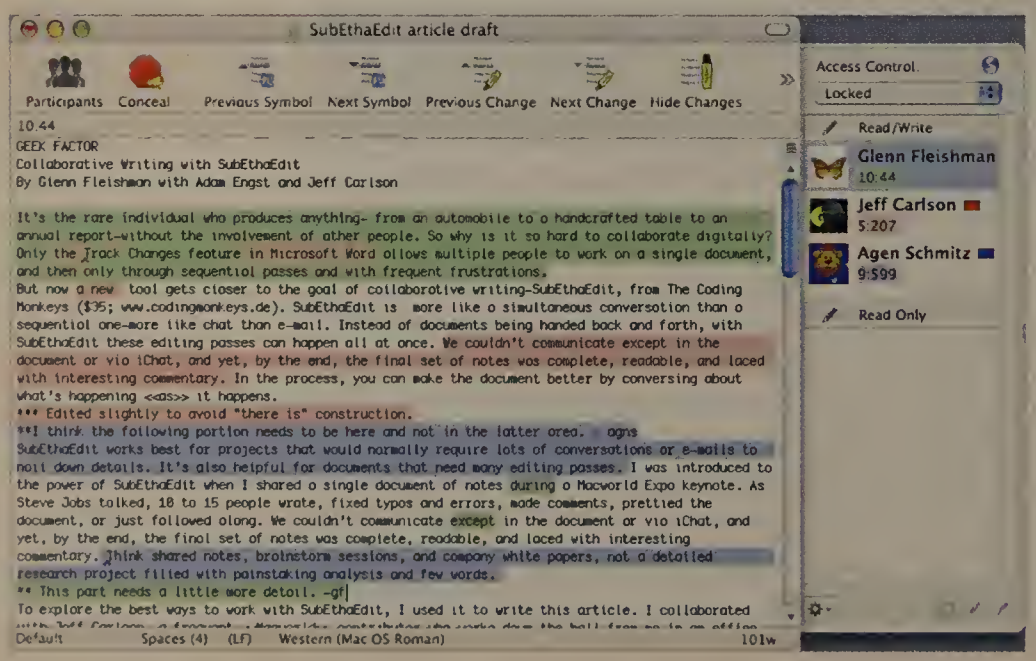
It's the rare individual who produces something—from an automobile to a handcrafted table to an annual report—without the involvement of other people. So why is it so hard to collaborate digitally? Up until now, only Microsoft Word's Track Changes feature allowed multiple people to work on a single document, and even then they could do so only through sequential passes and with frequent frustrations.

But now there's a tool that gets closer to the goal of collaborative writing—SubEthaEdit, from The Coding Monkeys ($35; www.codingmonkeys.de). SubEthaEdit is more like a simultaneous conversation than a sequential one—more like chat than e-mail. Instead of requiring that users hand documents back and forth, SubEthaEdit allows these editing passes to happen all at once. In the process, you can make the document better by conversing about what's happening *as* it happens (see "All Together Now").

I was introduced to the power of SubEthaEdit when I shared a single document of notes during a Macworld Expo keynote. As Steve Jobs talked, 10 to 15 people wrote, fixed typos and errors, made comments, or just followed along. We couldn't communicate except in the document or via iChat, but by the end, the final set of notes was complete, readable, and laced with interesting commentary.

To explore the best ways to work with SubEthaEdit, I used it to write this article. I collaborated with Jeff Carlson, a frequent *Macworld* contributor who works down the hall from me in an office in Seattle, and Adam C. Engst, a *Macworld* contributing editor who lives 2,500 miles away in Ithaca, New York. We've done many projects together, but we had a lot to learn about using SubEthaEdit to get this job done.

All Together Now
With SubEthaEdit, a group of editors can work on the same document at the same time. Participants' color-coded edits and comments wink in and out as they're made. The Internet window shows active participants and their status, as well as the current shared document.



Diving In

SubEthaEdit works best for projects that would normally require lots of conversations or e-mail messages to nail down details. It's also helpful for documents that require many editing passes. Think shared notes, brainstorm sessions, and company white papers, not a detailed research project filled with painstaking analysis and few words.

You can download and use SubEthaEdit noncommercially for free. When you launch the program, you'll see what looks like a simple text editor that lacks any formatting options except positioning with tabs and spaces. To get started, one person creates a new document, saves it on a local hard drive, and clicks on the Announce button in the button bar.

Get Connected How do other writers and editors join in? The easiest way is through Rendezvous connections over a local network. In a memorable presentation, Rendezvous inventor and evangelist Stuart Cheshire used a SubEthaEdit document for his simple slide show and accidentally left the document shared. When an audience member corrected an error on screen, Cheshire looked up to see that his technology had the unintended consequence of allowing spontaneous copyediting.

You can also access a document over the Internet, but the Mac that hosts it must have a publicly accessible Internet address. That requires either a static address that doesn't change over time, or a dynamic address that the outside world can reach.

A shared Internet connection—for example, a Wi-Fi gateway connected to a DSL modem—introduces another level of difficulty. You'll have to use port forwarding. Consult the SubEthaEdit manual and FAQ page at find.macworld.com/0253.

Join the Team Connect to a document by pasting a URL sent by the host (File: Copy Document URL) into the top field in the Internet window. (If that window isn't visible, go to Window: Internet.) You can also browse for documents by accessing the Window: Rendezvous window and double-clicking on a document.

You can join a document that's set to Read, Read/Write, or Locked. If the document is locked,

the person who has the file must admit each editor manually as he or she tries to connect. You don't need user names or passwords, but we found that leaving a document locked can prove troublesome. If remote users disconnect, they can't get back in again until you approve them.

SubEthaEdit assigns participants specific colors, which highlight their edits. Because the basic document is text with no metadata or hidden formatting tags (a trick that Microsoft Word, RTF, and HTML documents use to preserve presentation), these colors persist only while the document is open. If you want to keep track of who suggested what, you can export a picture of the document as a Web page (File: Export) complete with color coding.

Tips from the Front Lines

As I mentioned earlier, Jeff, Adam, and I wrote this article using SubEthaEdit. Since I'm the only one of us who has a static IP address, I started the draft, clicked on Announce, and then alerted Jeff and Adam via iChat. (It's helpful to use voice chat or the telephone as an adjunct to SubEthaEdit—that way, you don't have to manage typing in two applications.)

I wrote large parts of this article in draft form and then outlined the rest. The other two jumped in, and we spent time brainstorming, editing, and writing together. This caused some confusion until we broke the job down into separate tasks. After completing a working draft, I finalized it and sent it around using Word's Track Changes features to produce the draft we submitted to *Macworld*.

Set Ground Rules When people communicate face-to-face, they know not to interrupt, to give everyone a chance to talk, and so on. But in the virtual world of a SubEthaEdit document, you need new rules.

For one thing, it's easy to get disoriented while working with SubEthaEdit because words can appear and disappear in front of your eyes—even words you were working on. We agreed to not edit a section that someone else was actively editing, and to put a note at the bottom of the section when we were done editing.

Also, although SubEthaEdit color-codes text as you work on it with a different color corresponding to each editor, we needed the ability to annotate those edits to explain why we'd made them. We put notes below paragraphs we had changed—for example: *** This part needs a little more detail. -gf*

It's also important to agree that someone is in charge. In our experience, people implicitly let the person who started the document lead. But there may be situations where it's good to specify explicitly who controls the document. The leader is also the person who's most likely to keep others from chatting too much within the document.

Beware the Eager Deleter The greatest danger in SubEthaEdit is the overeager or accidental deleter: you can reverse deletions, but it's tricky if no one notices the change. And a malicious deleter could ruin a collaborative document. Because SubEthaEdit doesn't have an autosave feature, someone must save the document from time to time. Luckily, everyone—not just the person who created the original—can save a local copy.

If you lose important information, all is not lost. Even though the file reverts to plain text when you save and close it, Word's Compare Documents feature or BBEdit's Find Differences feature can show you the differences.

The Future Is Collaborative

Working as a team in this way takes some effort, but the bottom line is that it saves time. We've used SubEthaEdit to shave hours off projects—from building outlines and conducting group meetings to revising articles. We think it's only the first of many programs that will promote collaborative processes.

GLENN FLEISHMAN is the author of *Take Control of Your AirPort Network* (Peachpit Press, 2004; www.tidbits.com/takecontrol). JEFF CARLSON is the managing editor of TidBits and the author of *Making a Movie in iMovie and iDVD: Visual QuickProject Guide* (Peachpit Press, 2004). ADAM C. ENGST is a *Macworld* contributing editor and the publisher of TidBits.

CHECK IT OUT

Curiously Strong Battery Power

What do you get when you put together a FireWire port, a few batteries, some wire, and a playing-card box? You get 18 more hours of battery life for your iPod, that's what.

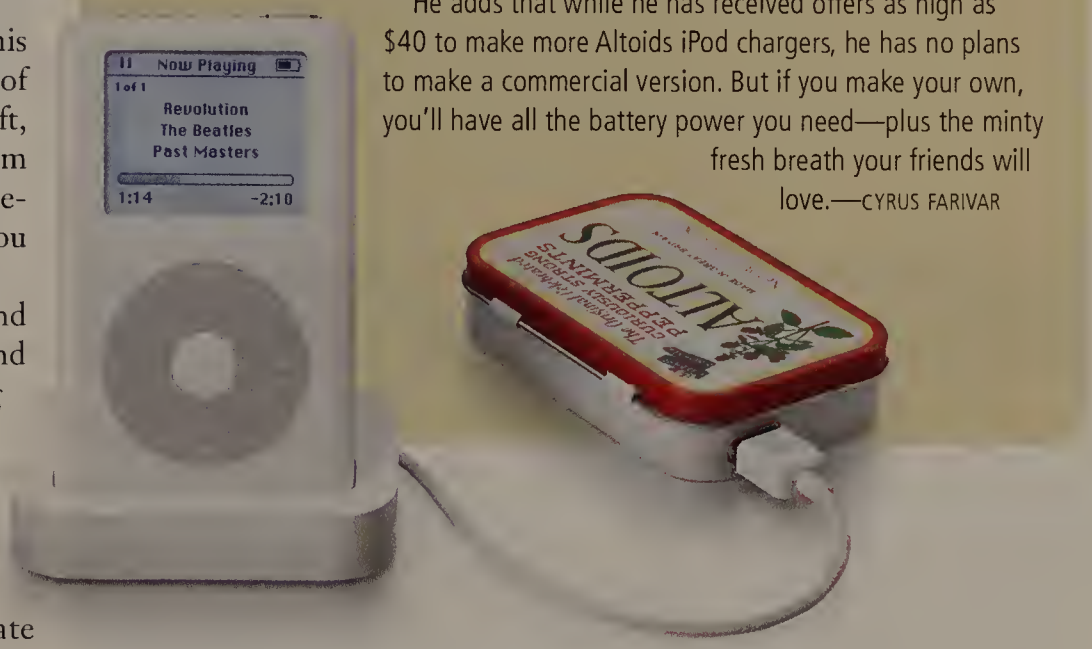
In October 2004, Drew Perry, 19, a lighting technician from York, England, released a simple schematic and photographs of his iPod Battery Pack contained entirely within a box of playing cards (see find.macworld.com/0254). This device, he says, cost him less than $6 to make and provides an additional 18 hours of battery life for his iPod. By comparison, Belkin's Backup Battery Pack for iPod (www.belkin.com) costs $60.

Perry's friends, skeptical at first, soon changed their minds. "Initially they call me a nerd," he says. "If they own an iPod, they then ask me to make one for them."

It wasn't long before Chris DiClerico, 31, a Web designer from New York City, saw the schematic and was inspired to do the same thing—but in an elegant, pocket-size Altoids mints tin. (See the plans at find.macworld.com/0255.) David Jones of Indianapolis, Indiana, duplicated the same feat around the same time (find.macworld.com/0256).

"[The Belkin charger] is kind of this big, weird, white hunk of plastic hanging on the back of your iPod," says DiClerico. "I think this is way cooler."

He adds that while he has received offers as high as $40 to make more Altoids iPod chargers, he has no plans to make a commercial version. But if you make your own, you'll have all the battery power you need—plus the minty fresh breath your friends will love.—CYRUS FARIVAR



PHOTOGRAPHY BY PETER BELANGER, ICON BY PAUL HOWALT

macosxhints@macworld.com

Mac OS X Hints

Unlock certain compressed Windows files, create a keyboard shortcut for making .zip archives, pause playback of animated GIFs, enable page scrolling in Safari and Mail, use Terminal to check the time in distant lands, and look up your Address Book contacts with Google.

Open Certain Compressed Windows .exe Files

When you come across a Windows self-extracting zip file—an archive that may contain Mac-compatible files wrapped in a seemingly unusable Windows executable file—you needn't fret. If you receive one that you're reasonably confident is a zip archive file (a PDF manual from Nikon, for example), here's something you can try.

Change the file's extension from *.exe* to *.zip*, and then drop it on Allume Systems' free StuffIt Expander (www.stuffit.com)—OS X's built-in zip expander can't handle these files. If the file is nothing more than a zip archive in disguise, it will expand into the uncompressed contents of the archive.

If you're comfortable in Terminal, however, you can use the `unzip` command—without first renaming the file. Just make sure that you're in the same directory as the file, and type `unzip` *`filename`*`.exe`.

Create a Keyboard Shortcut for Making .zip Archives

One of OS X 10.3's nice features is that it lets you create keyboard shortcuts for most of the Finder's menu items. Click on the Keyboard Shortcuts tab of the Keyboard & Mouse preference pane, click on the + (plus-sign) button, select the application you want to modify from the pop-up menu that appears, enter the exact menu title, and then press a combination of keys to create the shortcut.

But when you try to add a shortcut for creating .zip archives, it doesn't seem possible—when you select an item to compress, the menu item (in the File menu) is Create Archive Of, followed by the name of the selection. So how do you enter a changing selection name in the Keyboard Shortcuts panel?

Well, you don't. To create a .zip-archive shortcut, specify the Finder as the application and then just type `Create Archive` in the Menu Title box. Assign your keystrokes (⌘-control-shift-Z, for instance) and click on the Add button. To make your new shortcut take effect, you'll need to restart the Finder. You can do this by logging out and then back in, or through the Force Quit dialog box. Just press ⌘-option-escape, select Finder in the list, and then click on Relaunch.

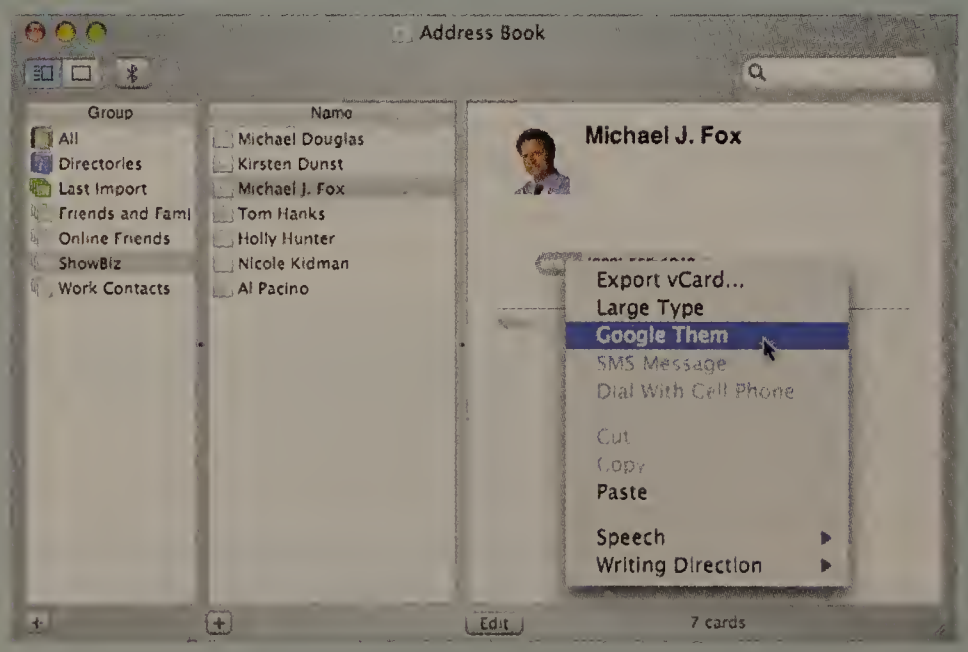
You should now have a keyboard shortcut next to the Create Archive menu item, and OS X will simply add the selection name as needed when you execute the command (see "Zip It Quick"). From now on, creating a .zip archive is as simple as highlighting something in the Finder and pressing your magical key combination.

CHECK IT OUT

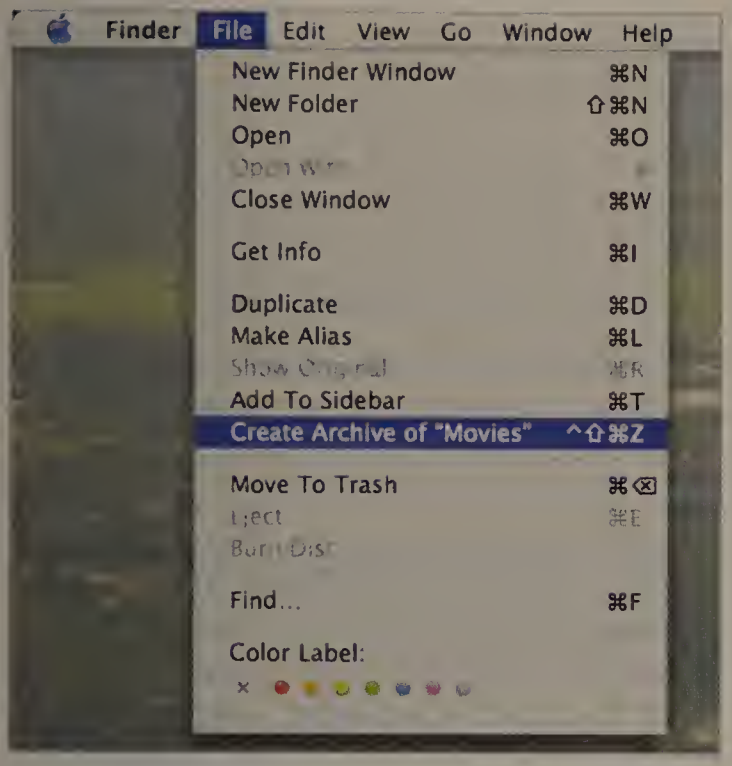
Google Your Contacts

Ever want to quickly run a Google search on one of the contacts in your Address Book list? Download our script at find.macworld.com/0272, and then drop it into the *your user folder*/Library/Address Book Plug-Ins folder (if this folder doesn't exist, create it).

Now launch Address Book and control-click on any contact's phone number. You'll see a Google Them option in the pop-up menu (see "Look Me Up"). Select it to open Safari, load Google's page, and start searching for your contact's name. If you want something more interesting than a Google Them label on the pop-up menu, you can change it by editing the words inside quotation marks in the line that reads `return "Google Them"` in the script. (You'll have to have a phone number entry for your contacts, as you can't associate a script with the Name field.)



Look Me Up Using a simple Address Book plug-in, you can quickly find out what Google knows about any of your contacts.



Zip It Quick Save yourself some time by adding a keyboard shortcut to OS X's built-in tool for creating .zip archives.

You can use this trick for most other menus that change with the Finder selection; just ignore the variable piece at the end and type in the core of the menu item's name.

Pause Playback of Animated GIFs

Many people think that animated GIFs were one of the worst inventions of the early days of the Internet. However, when used properly, those animations can convey information that would be difficult to get across in other ways. For instance, The Imaging Resource (http://imaging-resource.com), a digital-camera–review Web site, uses animated GIFs to show the different overlays on each camera's LCD screen. A problem, though, is that the animations blink by so quickly, you can't really get a good view of any individual screen.

To temporarily pause any animated GIFs on a page, you can either click on and release a top-level menu such as File or Edit (which may obscure part of the page you're trying to see), or just click and hold the mouse button on the scroll bar's thumb (the part that moves). As long as you have the mouse button down, the animated GIFs won't play. Release the mouse button, and the GIFs will go back into action.

If you'd like to really study a particular animated GIF, however, drag it to your desktop and open it in Preview. You'll then be able to view each frame as a separate image that you can browse with the Page Down and Page Up buttons.

Take Advantage of Page Scrolling in Safari and Mail

Both Mail and Safari suffer from the same scrolling bug: the page-up and page-down keys don't seem to work just where they would seem to be most useful.

In Mail, for example, if you have a long list of messages, pressing page-up or page-down won't let you scroll through them quickly—those keys affect only the message displayed in the preview pane, not the message list.

And in Safari, if you're viewing your bookmarks or browsing history, page-up and page-down don't work at all. You have to use the arrow keys (or your mouse) to move around these potentially long lists.

But a hidden keyboard shortcut can save you scrolling time in either application. Press and hold the control key before you press page-up or page-down, and you'll find that you get page-at-a-time scrolling—just as you would have expected the keys to perform when used on their own.

Contributing Editor ROB GRIFFITHS is the author of *Mac OS X Power Hound, Panther Edition* (O'Reilly, 2004) and runs the Mac OS X Hints Web site (www.macosxhints.com).

pico /var perl exit UNIX TIP OF THE MONTH

Check the Time around the World

Do you have friends scattered about the globe? And do you have trouble remembering whether it's yesterday or tomorrow in Australia? Terminal and some handy commands can help you avoid accidentally calling a friend in the middle of the night.

OS X includes time-zone information for a huge number of locations. To see what's available, open Terminal, type `cd /usr/share/zoneinfo`, and press enter. Then type `ls` and press enter. (You can find the same information in the Finder if you select Go: Go To Folder and type `/usr/share/zoneinfo` in the Go To The Folder box.) You'll see a large list of directories and files. Within the folders are the names of cities in each geographic area—Europe contains Amsterdam through Zurich, for example.

Now that you're suitably impressed by the collection of time zones, how can you put this data to good use? By employing the `env` command and the `TZ` variable, which sets the working time zone for your machine. The `env` command lets you run any other command with environment settings that may differ from those you currently use. To put it another way, `env` lets you run programs in a mode that differs from the mode in which you would normally run them. In this case, we're going to set the `TZ` variable so that `env` thinks we're in a new time zone, and then have `env` run the normal Unix date command as if we were in that time zone.

The `TZ` variable is defined by the names of the files and folders in the /usr/share/zoneinfo folder—the folder name comes first, then a slash, and then the city name within the folder. So to see the date and time in Reykjavik, Iceland, you'd type `env TZ=Atlantic/Reykjavik date`.

Press enter to see the current date and time as if your machine were located in Reykjavik. To change locations, just repeat the command with a new folder and city—`env TZ=US/Hawaii date`, for instance. If you check times around the world often, you might want to use an alias to make it easier. Using a Unix editor or a pure text editor, open the invisible .bash_profile file at the root of your user folder (or create it if it's not there already). Add an alias line for each location you want to create—for example, `alias hawaii='env TZ=US/Hawaii date'` for Hawaii.

Save the file, quit the editor, and then type `source .bash_profile`. Press enter. Now type your alias (`hawaii` in this example) to see the date and time for the location.

ICONS BY PAUL HOWALT; PHOTOGRAPH BY PETER BELANGER

HELP DESK

mac911@macworld.com

Mac 911

This month in *Mac 911,* we discuss fixing slow iTunes and iPhoto launches, showing the extensions of a group of files, making Finder views stick, and forcing text copied from Word to appear as text when it's pasted into an iChat window.

Lethargic Launching

My iMac has become extremely sluggish. Opening applications, especially iTunes and iPhoto, seems to take forever. Any suggestions?

Uwe Blecker

You can speed up the launch of iTunes by reducing the number of smart playlists that have the Live Updating option enabled. To test this fix, I created a dozen smart playlists on a 933MHz Power Mac G4 with the Live Updating option enabled, and then I quit iTunes. On relaunch it took the program about eight seconds to display the main iTunes window. When I disabled the Live Updating option in all the smart playlists and relaunched the program, the main window appeared in five seconds.

iPhoto's smart albums don't appear to impede that program's launch—in my tests, iPhoto launched in a relatively slow fashion regardless of the existence of smart albums. In this case, it's simply a matter of distinguishing a sluggish application from one that acts sluggishly. It is just in iPhoto's nature to launch slowly. You can lessen the impact of this slow launching by scaling thumbnails to their smallest size before quitting the program. When you quit iPhoto with thumbnails scaled all the way up (so one image takes up the entire iPhoto window), you have to wait a few extra seconds on relaunch for iPhoto to shift from the blurry overview image to the high-resolution image.

Seeking Mass Extension

To show the file extension for a particular file's name, one needs only to choose Get Info from the File menu and deselect the Hide Extension option. Is there a way to do the same thing for a selected group of files all at once?

Greg Geitzenauer

Indeed there is. The trick is that you must put all the files in the same folder. Once they're there, simply ⌘-click on the files you'd like to alter and press ⌘-I. When you perform this action, up pops the Multiple Item Info box. Here you'll find the Hide Extension option under the Name & Extension triangle. Just deselect this option, and the file extensions will appear in each selected file's name.

Note that the Hide Extension option will be disabled (in other words, it won't work) if you've included a folder among your selections.

Unreliable Views

Every time I restart my Mac or log in, my folders' view settings have shifted. Despite configuring the Finder to display my Applications folder in List view and my Home directory in Icon view, the Applications folder shows small icons scattered all over and on top of each other, and my Home directory is in List view. How do I make my icons behave?

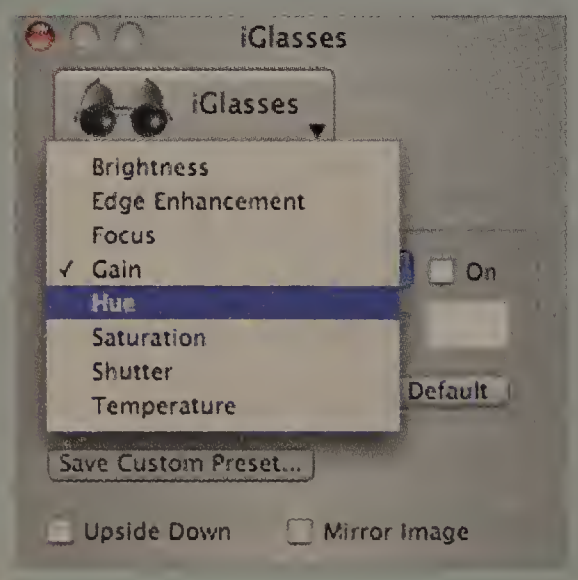
Steve Crandall

This is one of those problems for which no single solution exists. To start, let's be sure that you're doing views properly. To create a view that sticks, you must open a Finder window, apply the view you prefer, and

TIP OF THE MONTH

You'll Flip over This

In the December 2004 *Mac 911,* you addressed the issue of flipping the image from an iSight camera with mechanics. This is no longer necessary, thanks to iGlasses, an $8 shareware application from Ecamm Network (find.macworld.com/0259). iGlasses can not only flip and mirror an iSight image (thus allowing you to mount it upside down); it also allows you to enhance the picture that the iSight broadcasts, by brightening the image and fine-tuning color settings. *[For a full review of iGlasses, see* Mac Gems, *February 2005.—Ed.]*



Steve Kellener

Picture Prescription

If you're having problems with color balance or low light (or if you simply want to flip your iSight), just outfit your Mac with iGlasses.

then *close the window*. The invisible .DS_Store file that contains view information won't update until the window is closed.

Let's say you've done this but the views still won't stick. First try tossing out the com.apple.finder.plist file, which is found at *your user folder*/Library/Preferences. The Mac will create a new Finder preferences file, which may solve your problem. If not, it's time to take sterner measures: log in as root and arrange views the way you'd like them to appear when you're logged in to your usual account.

Fire up NetInfo Manager, click on the lock icon at the bottom of the window, enter your administrator password, click on OK, and choose Enable Root User from the Security menu. You'll be prompted to enter a password to gain access to root. Create such a password, quit NetInfo Manager, and log out.

If your login screen is configured to show blank Name and Password fields, enter `root` in the Name field and the root password you created (in NetInfo Manager) in the Password field. If the login screen displays a list of names, press option-return and click on any name. A window with blank Name and Password fields will appear. Arrange windows with the views you like, close them, log out of root, and log in to your normal account. For the sake of security, return to NetInfo Manager and disable the root account (follow the steps for enabling root, but select Disable Root User from the Security menu).

A Word about iChat

Whenever I try to copy a bit of text from Microsoft Word into iChat, an attachment appears in the iChat window instead of the text. What's going on?

Bill Dunn

Word text is formatted in such a way that iChat thinks it's a graphics file instead of text. When you send one of these attachments, recipients see a black bar rather than words. The secret to resolving the issue is to strip out that formatting before you bring the copied text into iChat.

Although you can do this by pasting the text into a text editor, copying it again, and pasting it into iChat, who needs the aggravation? I prefer Carsten Blüm's free Plain Clip (find.macworld.com/0257), an application that strips formatting from text stored in the Clipboard, combined with Jean-Daniel Dupas's free Spark 2.0 (find.macworld.com/0258), which lets you create hot keys for launching applications and documents, executing AppleScripts, and controlling iTunes. I've used Spark to create a key combination that invokes Plain Clip, so when I want to copy text from Word into iChat, I copy the text, press ⌘-shift-C (the hot key I created to launch Plain Clip), and paste the text into iChat.

ICONS BY PAUL HOWALT

UNSOLICITED ADVICE

Manage Media

Given the mission of *Mac 911*, you'd think my mailbox would spill over with letters demanding to know the meaning of arcane error messages or the reason that a Mac has suddenly caught fire.

Hardly. No, what readers want to know most is how to manage the media they own—specifically, how to use programs bundled with a new Mac on an old Mac, how to back up DVDs, and how to restore a corrupted music library from an iPod. Allow me to offer the shorthand versions of solutions for these problems:

Using Bundled Programs on Another Computer CharlesSoft's $20 Pacifist (www.charlessoft.com) is designed to extract folders and files from OS X .pkg files. It's the tool to use for installing a single application from an Apple installation disc.

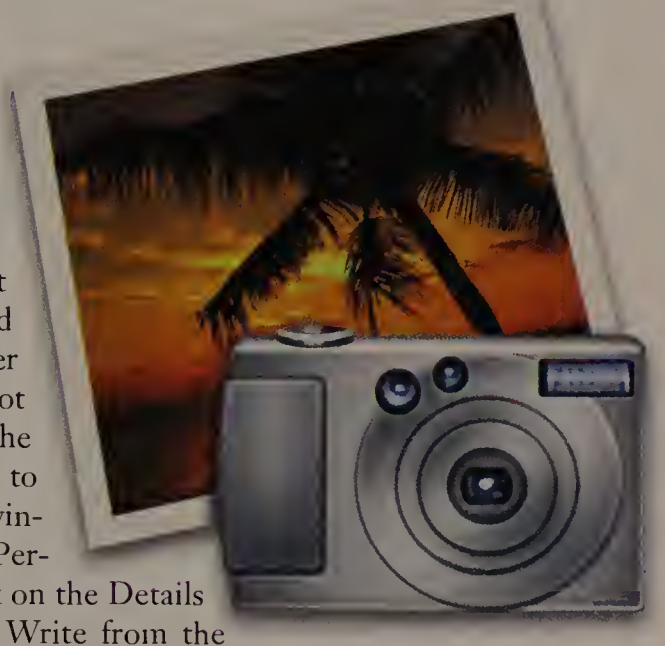
Backing Up a DVD Opus Computer Consultancy's free DVDBackup (find.macworld.com/0260) can back up a DVD to your Mac's hard drive. It will not, however, allow you to create a disc-based copy of the DVD's contents. To create a disc-based backup, get DVD2one (€50 [about $66 at press time]; www.dvd2one.com), a tool that compresses the Video_TS folders created by DVDBackup so they fit on a 4.7GB disc.

Restoring Your Music Library from an iPod The Little App Factory's $10 iPodRip (find.macworld.com/0261) can transfer to your Mac not only an iPod's music library but also its playlists.

Family Album

My son and I share an iMac at home. Is there a way for us to use the same iPhoto library?

Kiki Mulliner



With the proper privileges, this can be done with aliases. It works this way:

Choose the most up-to-date iPhoto Library folder (located at *your user folder*/Pictures) and move it to the Shared folder inside the Users folder at the root level of the hard drive. Click on the iPhoto Library folder, press ⌘-I to call up the iPhoto Library Info window, click on the Ownership & Permissions triangle, and then click on the Details triangle below. Select Read & Write from the Access pop-up menu directly beneath the Group pop-up menu, select Read & Write from the Others pop-up menu, and then close the Info window. Hold down the ⌘ and option keys and drag the iPhoto Library folder back to the Pictures folder to create an alias.

Switch to your son's user account, change the name of his iPhoto Library to something like iPhoto Library Old (in case you want to use this library again), open the Shared folder within the Users folder, and ⌘-option-drag that folder's iPhoto Library folder to your son's Pictures folder to create an alias. □

Contributing Editor CHRISTOPHER BREEN is also the editor in chief of Playlistmag.com and the author of *Secrets of the iPod*, fifth edition (Peachpit Press, 2005).

ADVERTISERS AND PRODUCT INDEX

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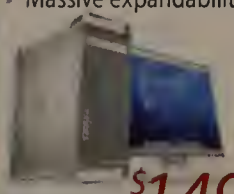

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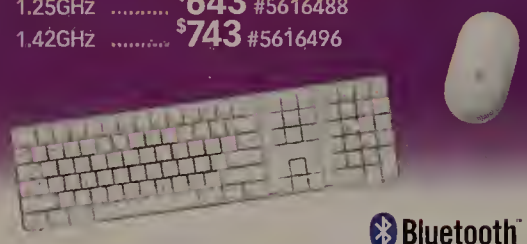

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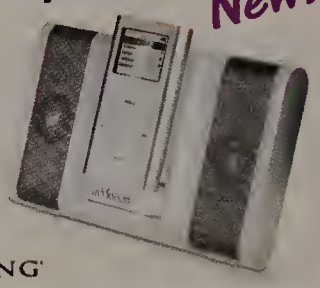

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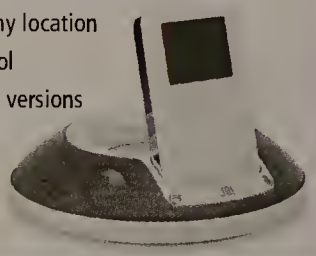

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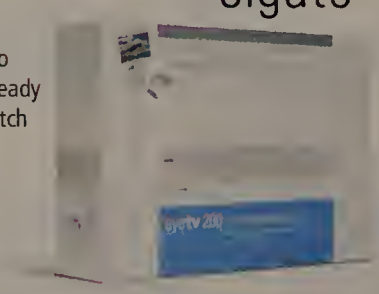

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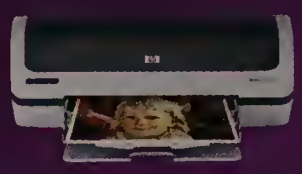

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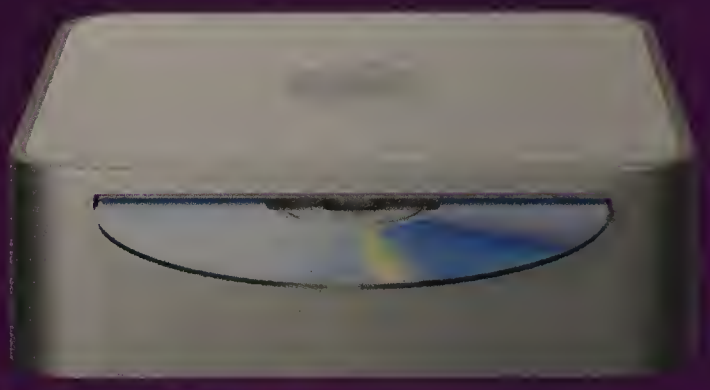

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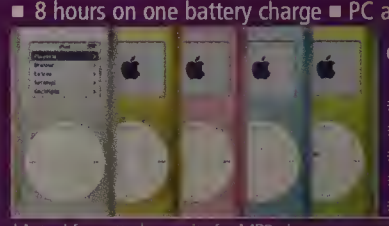

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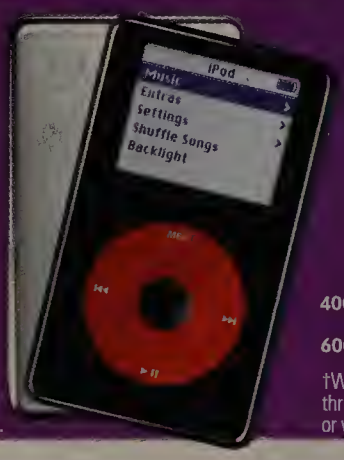

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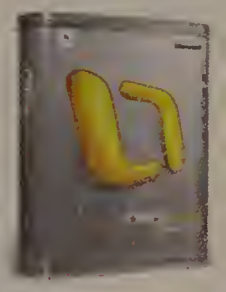

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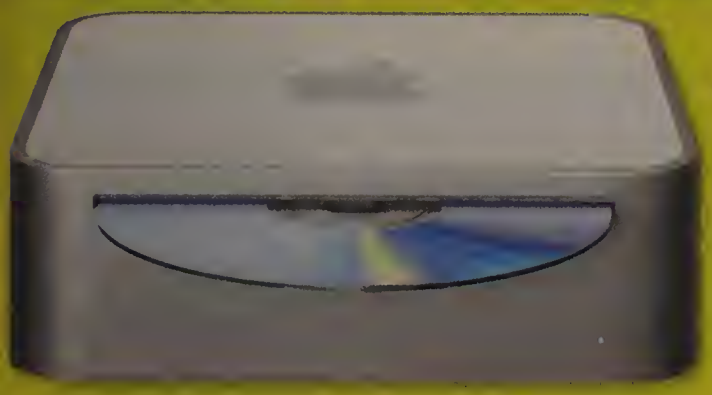

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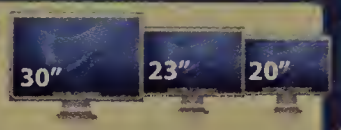

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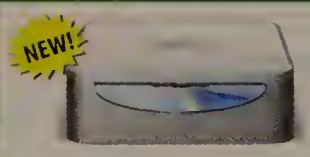

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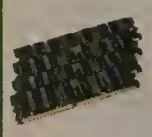

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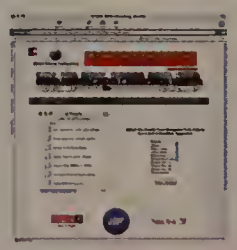

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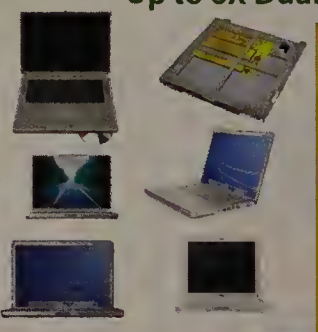

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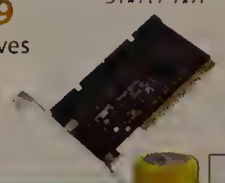

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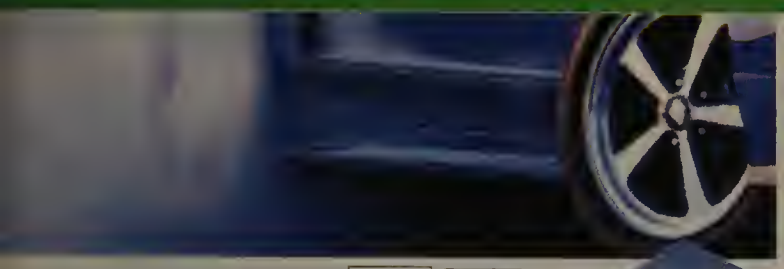

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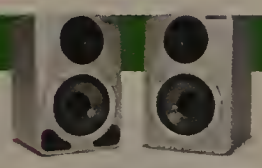

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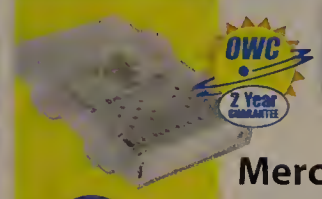

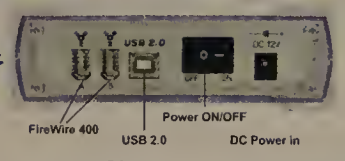

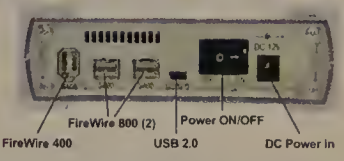

Mercury Elite Pro

Size	Speed	Data Buffer	FireWire 400/USB	FW800/ 400*	FW800/ 400/USB
80GB	7200RPM	2MB	$129.99	$149.99	$169.99
120GB	7200RPM	8MB	$165.99	$189.99	$199.99
160GB	7200RPM	8MB	$179.99	$199.99	$219.99
200GB	7200RPM	8MB	$209.99	$239.99	$249.99
250GB	7200RPM	8MB	$229.99	$249.99	$269.99
300GB	7200RPM	8MB	$289.99	$319.99	$329.99
400GB	7200RPM	8MB	$429.99	$449.99	$469.99

Call for other Available Models and Options!

* Elite 800 Pro FW800/400 solution has same ports as pictured FW800/400 + USB model, without the USB 2.0 port.

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OWC Mercury Elite Pro

The sleek, compact solution that stands or stacks.

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Mercury On-The-Go

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Case kits include all connecting cables and driving mounting screws.
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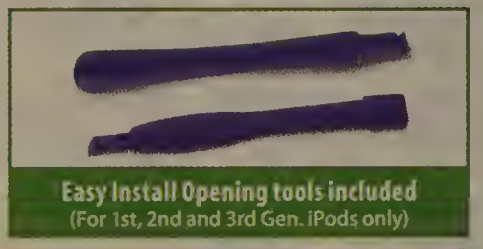

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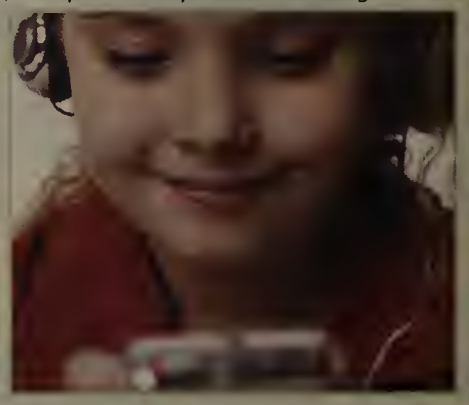

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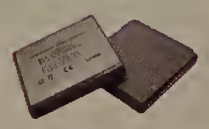

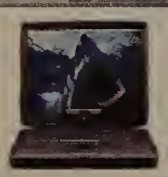

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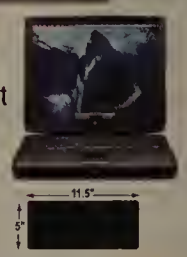

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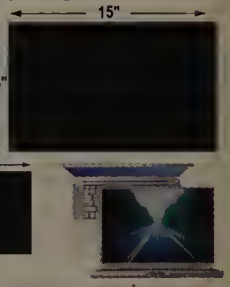

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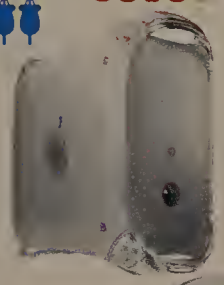

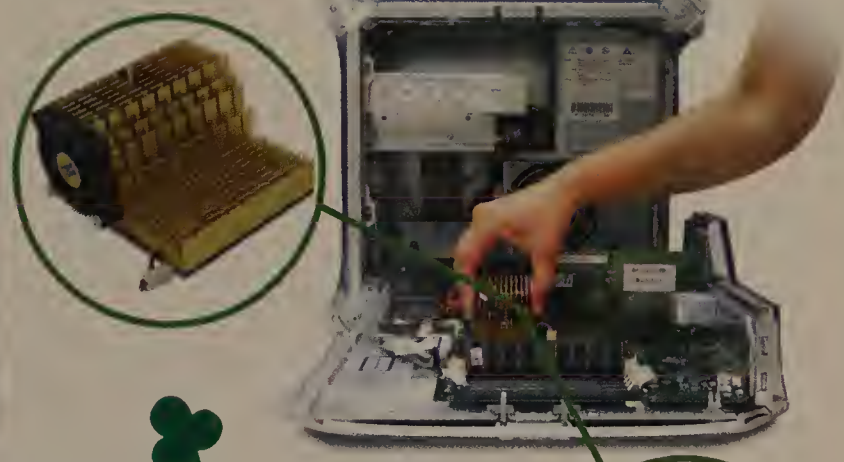

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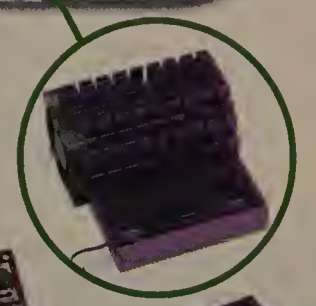

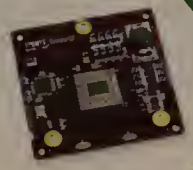

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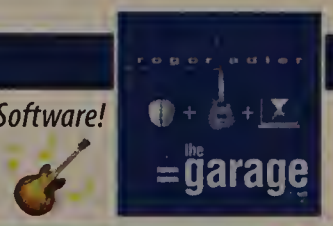

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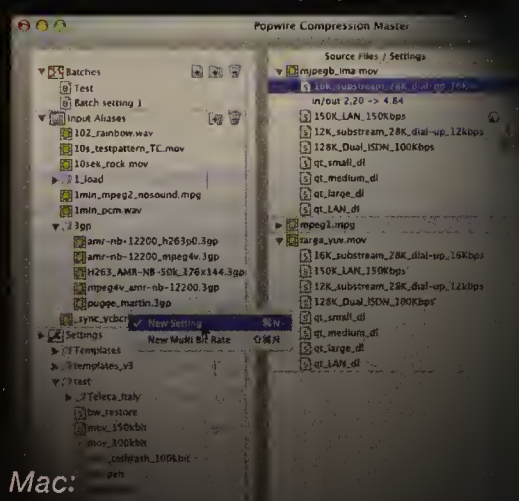

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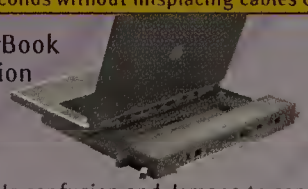

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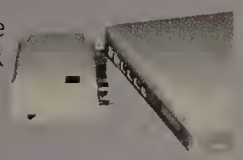

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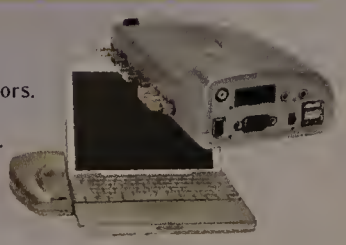

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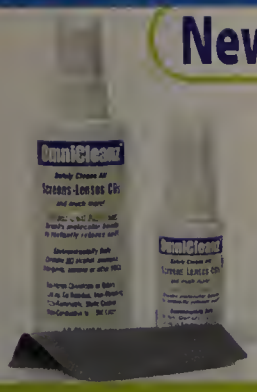

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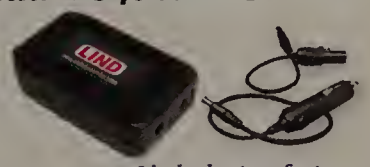

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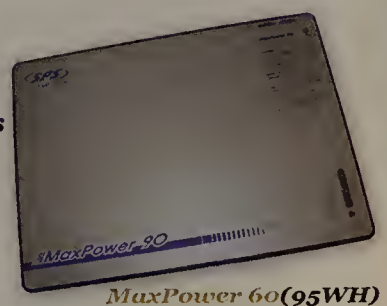

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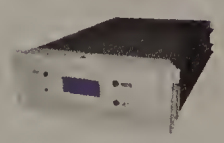

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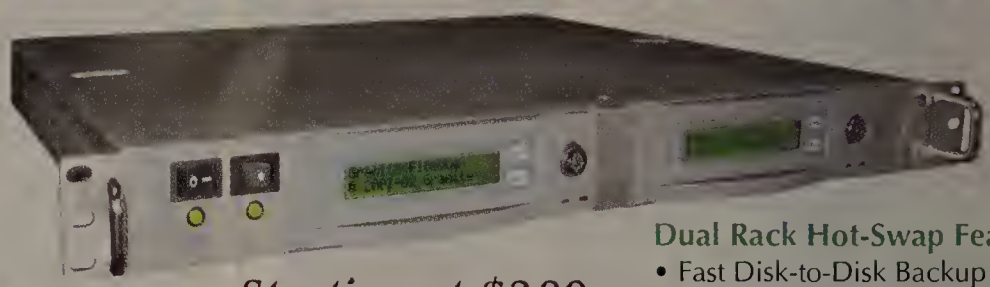

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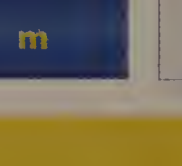

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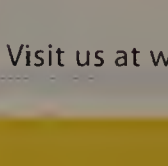

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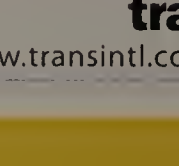

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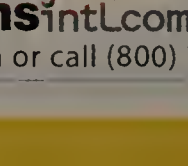

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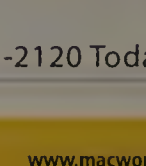

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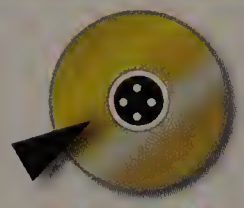

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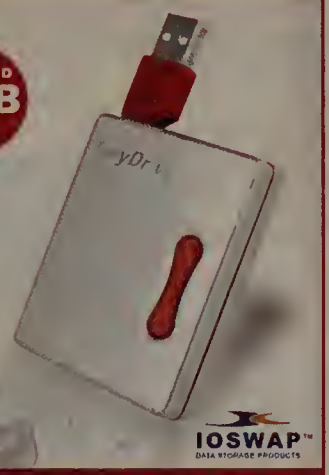

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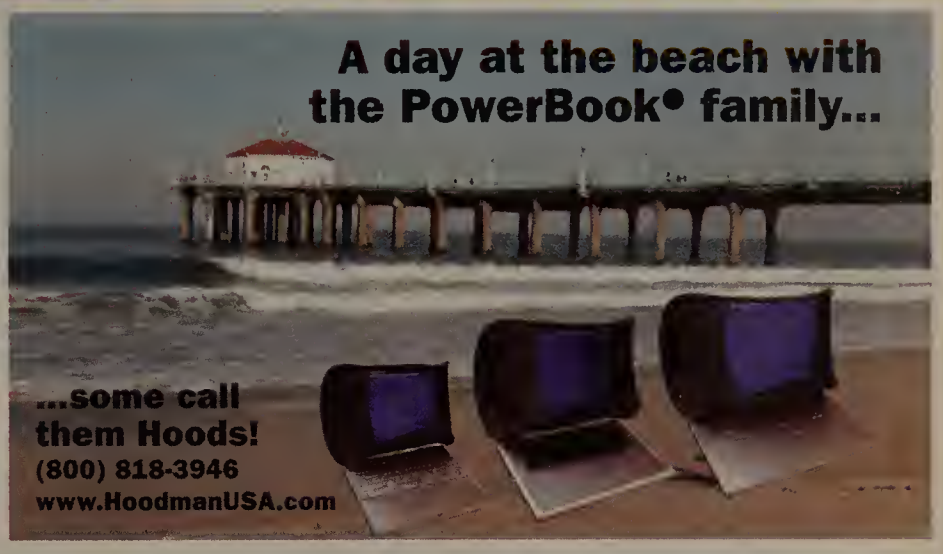

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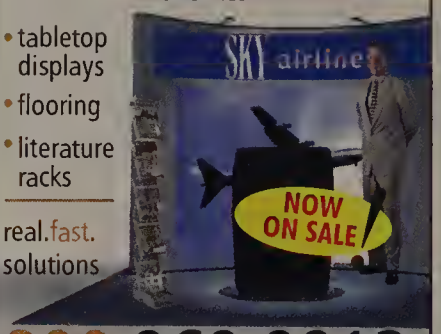

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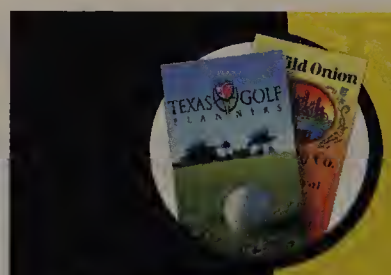

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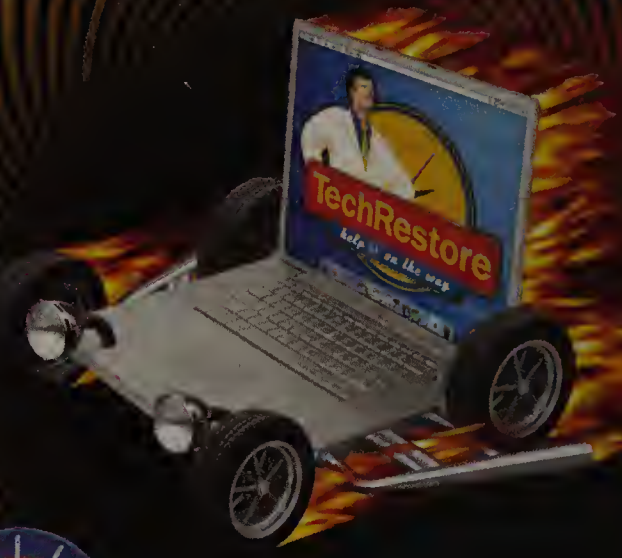

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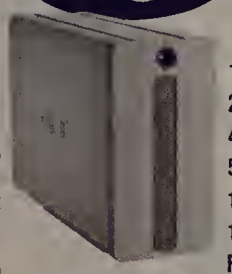

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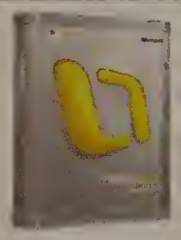

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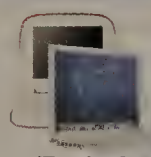

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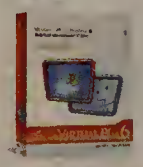

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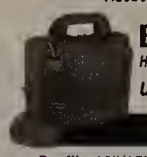

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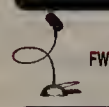

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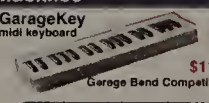
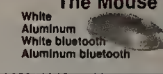
GarageKey midi keyboard



$119
Garage Bend Compatible

The Mouse



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Mice

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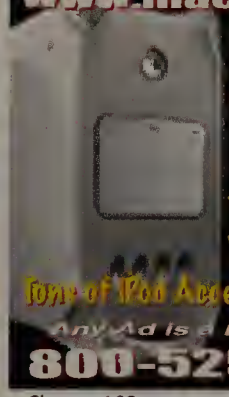

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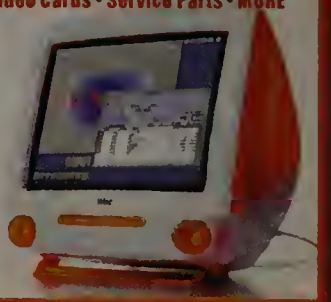

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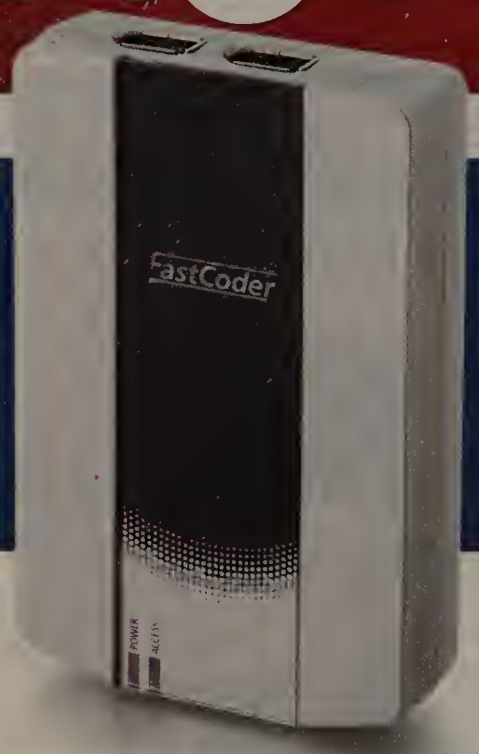


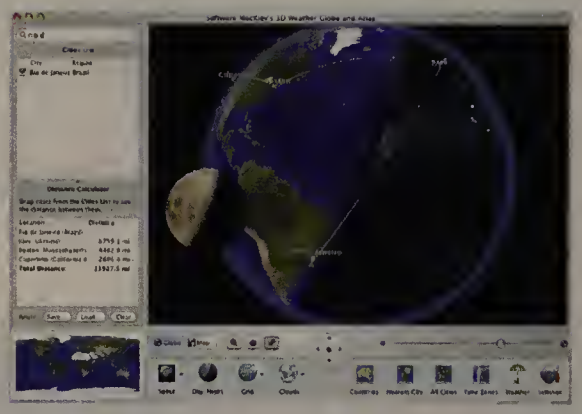
PHOTOGRAPH BY PETER BELANGER

FASTCODER

Being able to create high-quality DVDs on your Mac is a wonderful thing—watching the hours tick by as you encode your video isn't. That's what makes me so excited about LaCie's $249 FastCoder. Plug the tiny box into a FireWire port on your G3-, G4-, or G5-based Mac, and you've got a real-time hardware encoder that turns your DV video into MPEG-2 files ready for use with Apple's DVD Studio Pro or the included CaptyDVD software. And because it's hardware encoding, you can expect better quality than you'd get from Apple's Compressor, even at lower bit rates (www.lacie.com).—JONATHAN SEFF

PDFpen 2.0 and PDFpenPro

As I sit waiting for Adobe Acrobat 6.0 Standard to load, I often muse that there has to be a better way for run-of-the-mill users to realize the promise of PDF—and now I think I've found it. SmileOnMyMac's $50 PDFpen 2.0 lets me look at PDFs in different views, fill out and save PDF forms, reorder pages via a drag-and-drop interface, and write on (read: *sign*) a PDF from my graphics tablet (as well as add graphics to boring PDFs). The $95 PDFpenPro does all this, too, and it allows you to create PDF forms (www.smileonmymac.com).—JENNIFER BERGER



3D Weather Globe & Atlas

Has the sun set in Rome? Is it raining in Lima? And where the heck is Kyrgyzstan? Software MacKiev's $40 3D Weather Globe & Atlas uses high-res NASA satellite images to create an accurate 3-D globe, complete with current cloud cover and temperature data (www.mackiev.com).—KELLY LUNSFORD

ORIDJINOFFICE

You're never going to confuse your workspace with a nice, sandy beach in Hawaii. But the place where you spend the majority of your waking hours doesn't have to feel like the slave ship from *Ben-Hur.* DesignJourney Industrial is doing its part to make the cubicle someplace you'll want to spend eight hours each day. The $1,799 OridjinOffice has frames and supports that hold up a high-quality plywood work surface, finished with a proprietary staining process and surrounded by screens—which lock at the end of the workday to keep the contents of your desk safe from prying eyes (www.designjourney.com).—PHILIP MICHAELS

WHAT'S HOT

Brought to you by John Moltz of the Crazy Apple Rumors Site (www.crazyapplerumors.com)

1. **Apple Stores report that the iPod shuffle and Mac mini are selling like hotcakes.** *And just to follow through with this analogy, the International House of Pancakes reports that hotcakes are still selling briskly.*
2. ***PC Magazine* columnist John Dvorak praises the Mac mini, calling it close to perfect.** *Did anyone else just hear the sound of four horsemen approaching?*
3. **The iTunes Music Store hits 250 million tracks downloaded.** *Startlingly, 100 million of them? Polkas. Who knew?*
4. **Apple gets corporate with a Web site for IT administrators, new Xserves, and Xsan.** *However, thousands of admins are still confused about which version of Windows the Mac uses.*

PAPERHUB

It's a paper tray. It's a hub. No, it's both: the $150 PaperHub, a two-tiered, environmentally friendly, brushed-aluminum paper tray from Pressure Drop (which specializes in "visionary solutions fusing art and technology"), looks deceptively simple—until you turn it around to find yourself staring at a bevy of ports. Connect one USB and one FireWire cable from your Mac to the PaperHub (and plug in its power cable), and you've got yourself a powered hub with four USB 2.0 and four FireWire ports (www.pdrop.com).—JACKIE DOVE

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